

AKZ222-150100-
MIDDLE TANANA VALLEY-
INCLUDING...FAIRBANKS...FORT WAINWRIGHT...EIELSON AFB...ESTER...NORTH POLE...MOOSE CREEK...TWO
RIVERS...FOX...CHATANIKA...CHENA HOT SPRINGS...SOURDOUGH CAMP
738 AM ADT MON APR 14 2008

...SNOW ADVISORY IN EFFECT UNTIL 6 PM ADT THIS AFTERNOON...

.TODAY...SNOW IN THE MORNING...THEN SNOW LIKELY IN THE AFTERNOON. PATCHY FOG. ADDITIONAL SNOW ACCUMULATION OF 2 TO 4 INCHES. TOTAL SNOW ACCUMULATION 3 TO 7 INCHES. HIGHS 30 TO 35. WEST WINDS 10 TO 20 MPH...EXCEPT GUSTS TO 30 MPH OVER THE HILLS IN THE AFTERNOON.

.TONIGHT...MOSTLY CLOUDY. SCATTERED SNOW SHOWERS IN THE EVENING... THEN FLURRIES AFTER MIDNIGHT. PATCHY FOG. LOWS AROUND 15. WEST WINDS 10 TO 25 MPH...STRONGEST OVER THE HILLS.

.TUESDAY...MOSTLY CLOUDY. PATCHY FOG. FLURRIES IN THE MORNING...THEN A CHANCE OF SNOW IN THE AFTERNOON. HIGHS AROUND 25. WEST WINDS TO 10 MPH.

.TUESDAY NIGHT...MOSTLY CLOUDY. CHANCE OF SNOW. LOWS 5 TO 10. WEST WINDS AROUND 10 MPH.

.WEDNESDAY...MOSTLY CLOUDY. CHANCE OF SNOW. HIGHS AROUND 25. WEST WINDS 10 TO 15 MPH.

.WEDNESDAY NIGHT...MOSTLY CLOUDY. CHANCE OF SNOW. LOWS NEAR 10 ABOVE.

.THURSDAY...PARTLY CLOUDY. HIGHS NEAR 30.

.THURSDAY NIGHT...PARTLY CLOUDY. LOWS NEAR 10 ABOVE.

TEMPERATURE / PRECIPITATION

FAIRBANKS 32 14 26 / 100 50

Note: 5AM release had total snow accumulation of 6 inches

Forecast for: PAFA (FAIRBANKS, AK, US)

Forecast period: 1600 to 1800 UTC 14 April 2008

Winds: from the SW (230 degrees) at 5 MPH (4 knots; 2.1 m/s)

Visibility: 1.00 miles (1.61 km)

Ceiling: 1200 feet AGL

Clouds: scattered clouds at 500 feet AGL broken clouds at 1200 feet AGL overcast cloud deck at 2500 feet AGL

Weather: -SN BR (light snow, mist)

Text: FM1800 24010KT 2SM -SN BR OVC015

Forecast period: 1800 to 2000 UTC 14 April 2008

Winds: from the WSW (240 degrees) at 12 MPH (10 knots; 5.2 m/s)

Visibility: 2.00 miles (3.22 km)

Ceiling: 1500 feet AGL

Clouds: overcast cloud deck at 1500 feet AGL

Weather: -SN BR (light snow, mist)

Forecast period: 2000 to 2200 UTC 14 April 2008

Winds: from the WSW (250 degrees) at 14 MPH (12 knots; 6.2 m/s)

Visibility: 4 miles (6 km)

Ceiling: 4000 feet AGL

Clouds: scattered clouds at 2000 feet AGL overcast cloud deck at 4000 feet AGL

Weather: -SN (light snow)

Forecast period: 2200 UTC 14 April 2008 to 0400 UTC 15 April 2008

Winds: from the WSW (250 degrees) at 17 MPH (15 knots; 7.8 m/s) gusting to 23 MPH (20 knots; 10.4 m/s)

Visibility: 5 miles (8 km)

Ceiling: 5000 feet AGL

Clouds: scattered clouds at 2500 feet AGL broken clouds at 5000 feet AGL

Weather: -SHSN (light snow showers)

Forecast period: 0400 to 1200 UTC 15 April 2008 (THRU 4AM TOMORROW)

Winds: from the W (270 degrees) at 7 MPH (6 knots; 3.1 m/s)

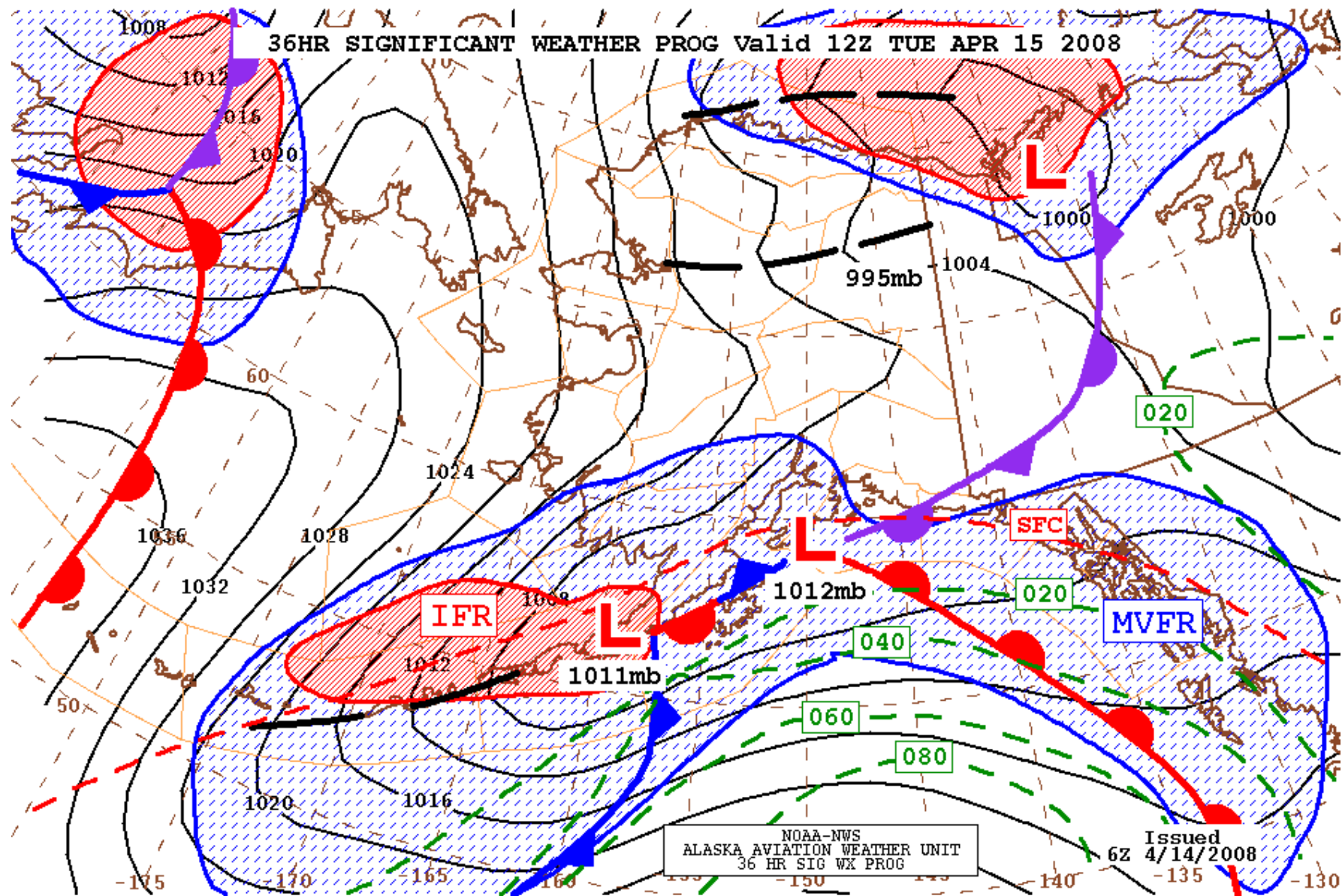
Visibility: 6 or more miles (10+ km)

Ceiling: 8000 feet AGL

Clouds: overcast cloud deck at 8000 feet AGL

Weather: no significant weather forecast for this period

36HR SIGNIFICANT WEATHER PROG Valid 12Z TUE APR 15 2008

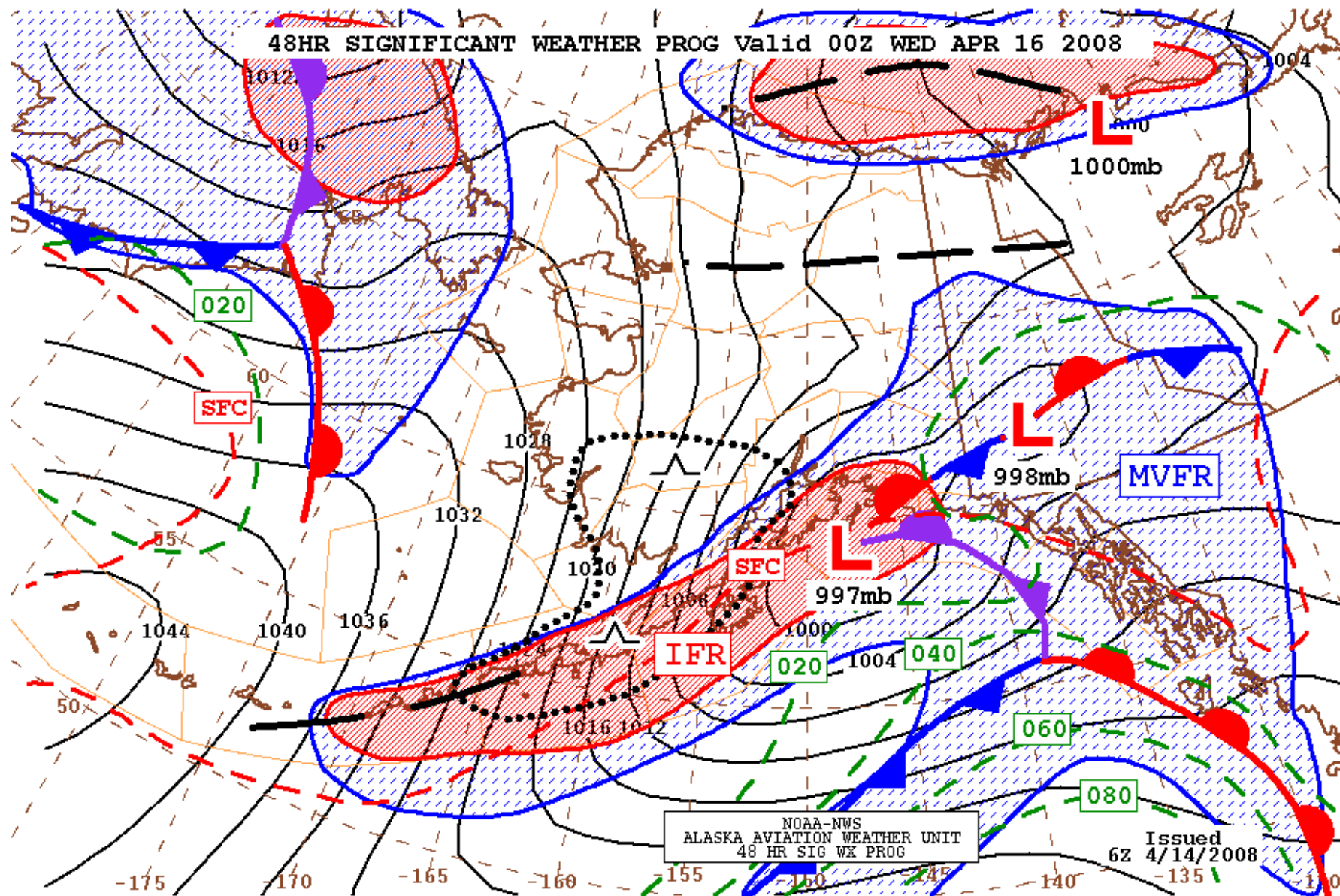


NOAA-NWS
ALASKA AVIATION WEATHER UNIT
36 HR SIG WX PROG

Issued
6Z 4/14/2008

080415/1200V036 SFC SM5EMSL

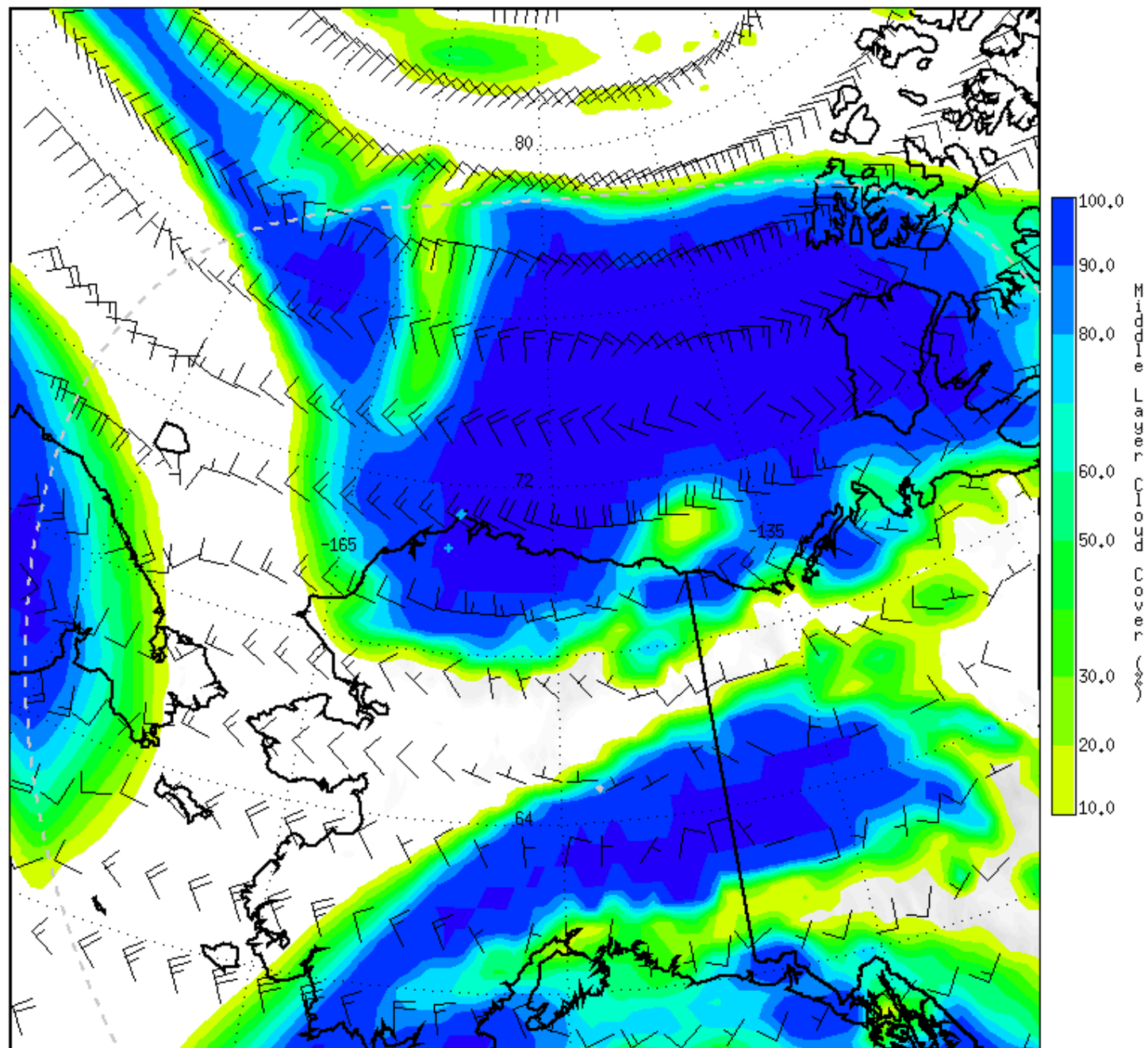
48HR SIGNIFICANT WEATHER PROG Valid 00Z WED APR 16 2008



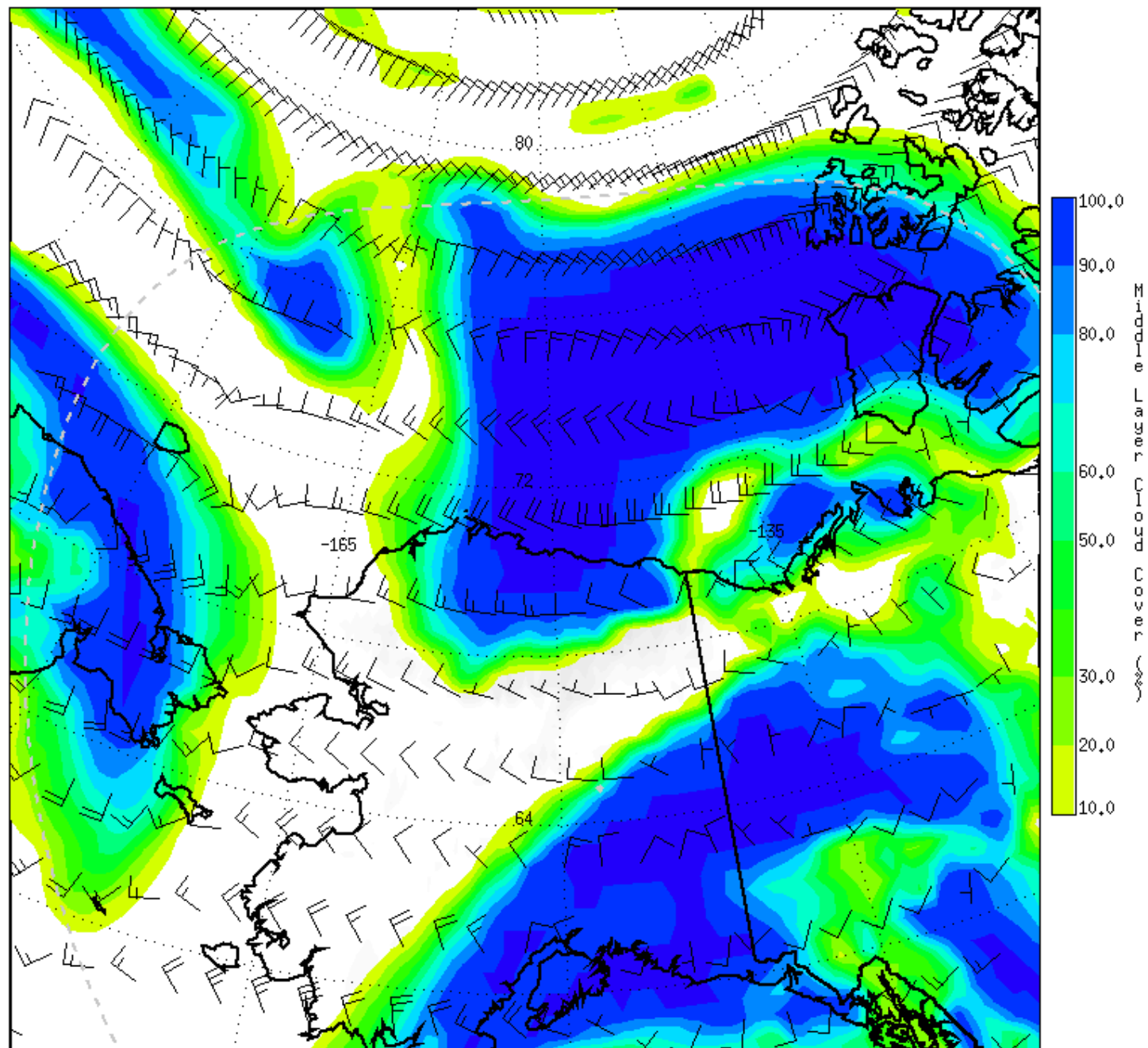
Issued
6Z 4/14/2008

080416/0000V048 SFC SM5EMSL

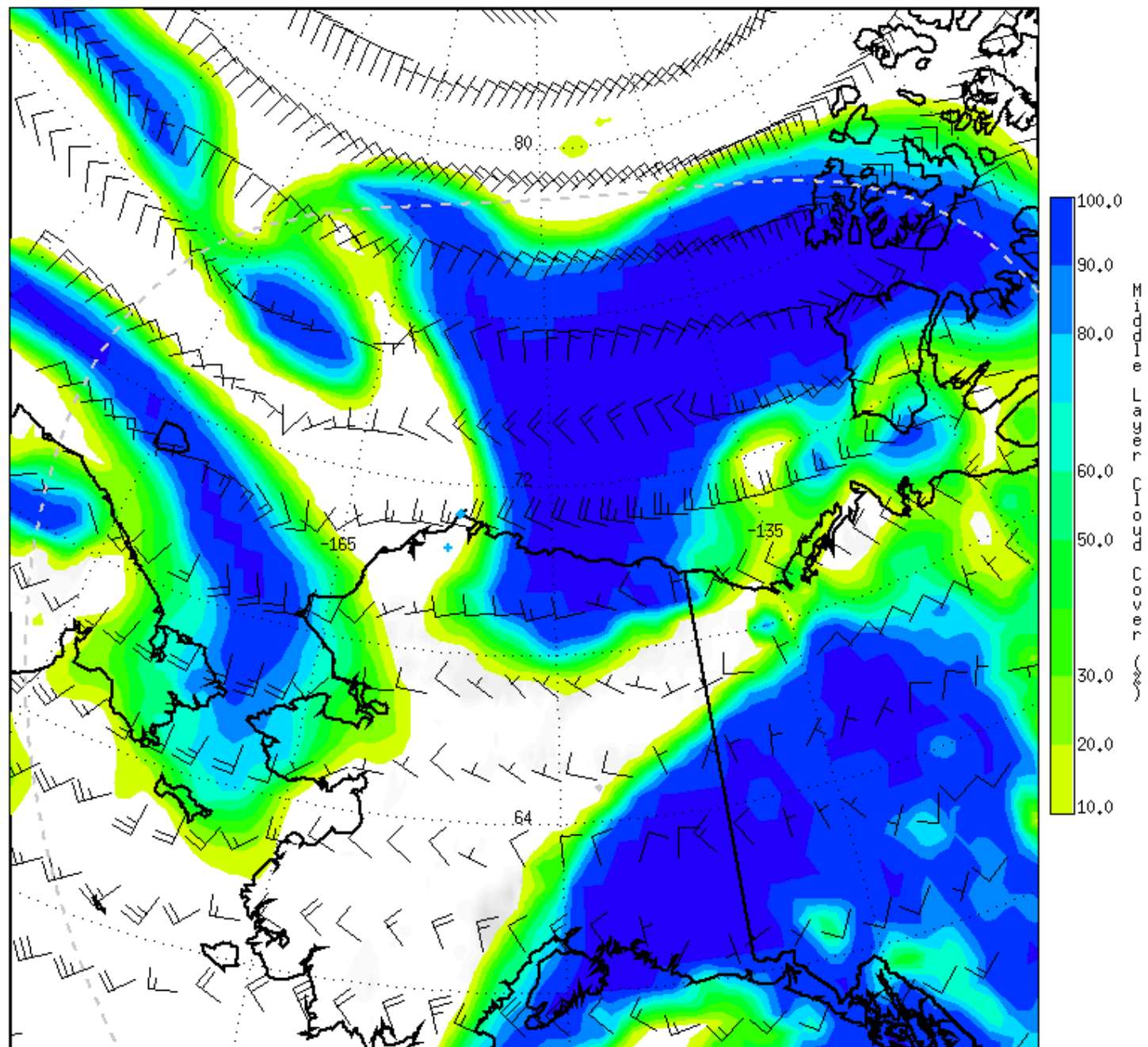
NCEP GFS Wind Flags (knots) on Press = 1000 hPa
Init:2008041406 Valid:2008041518



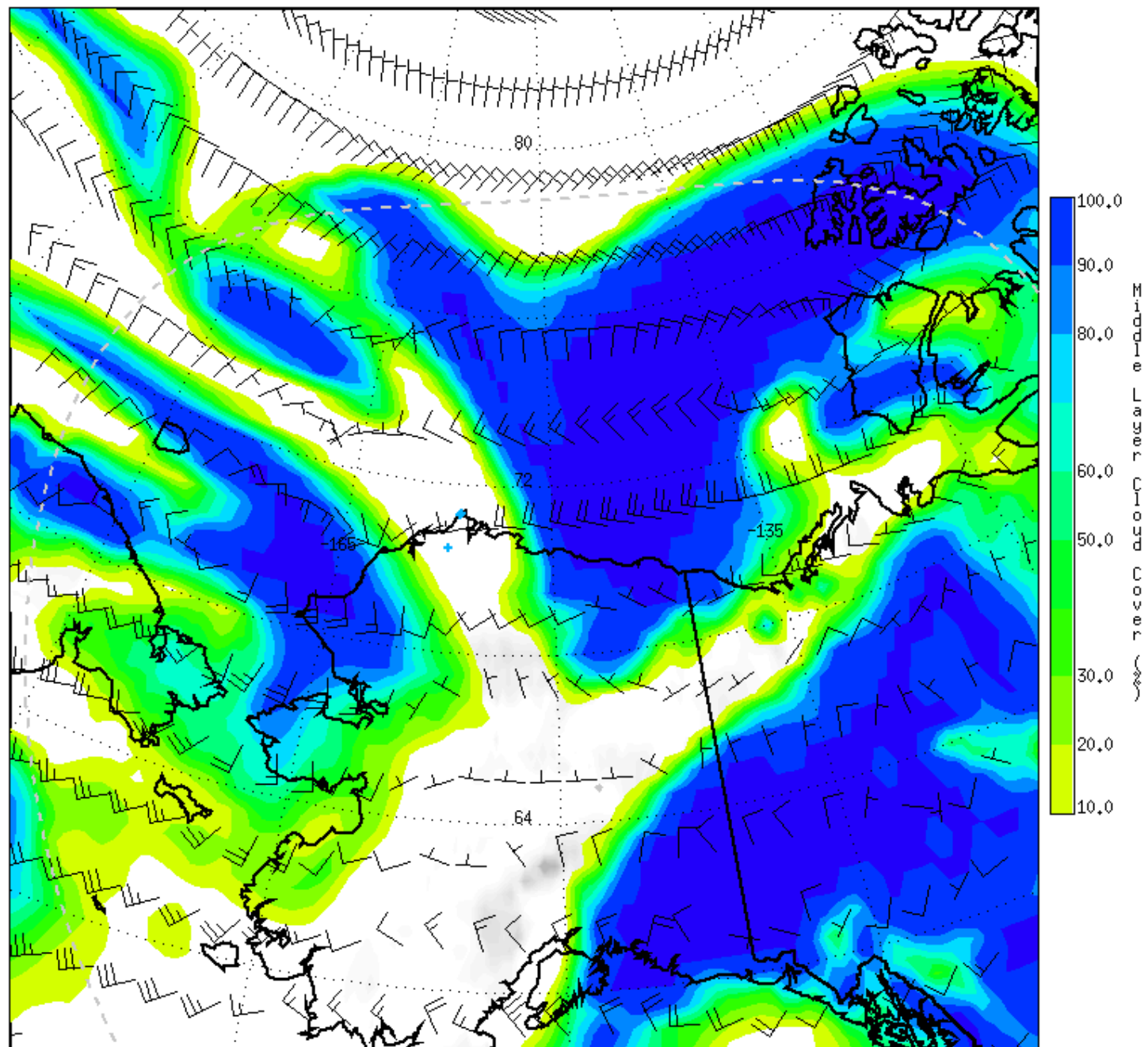
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Init:2008041406 Valid:2008041600

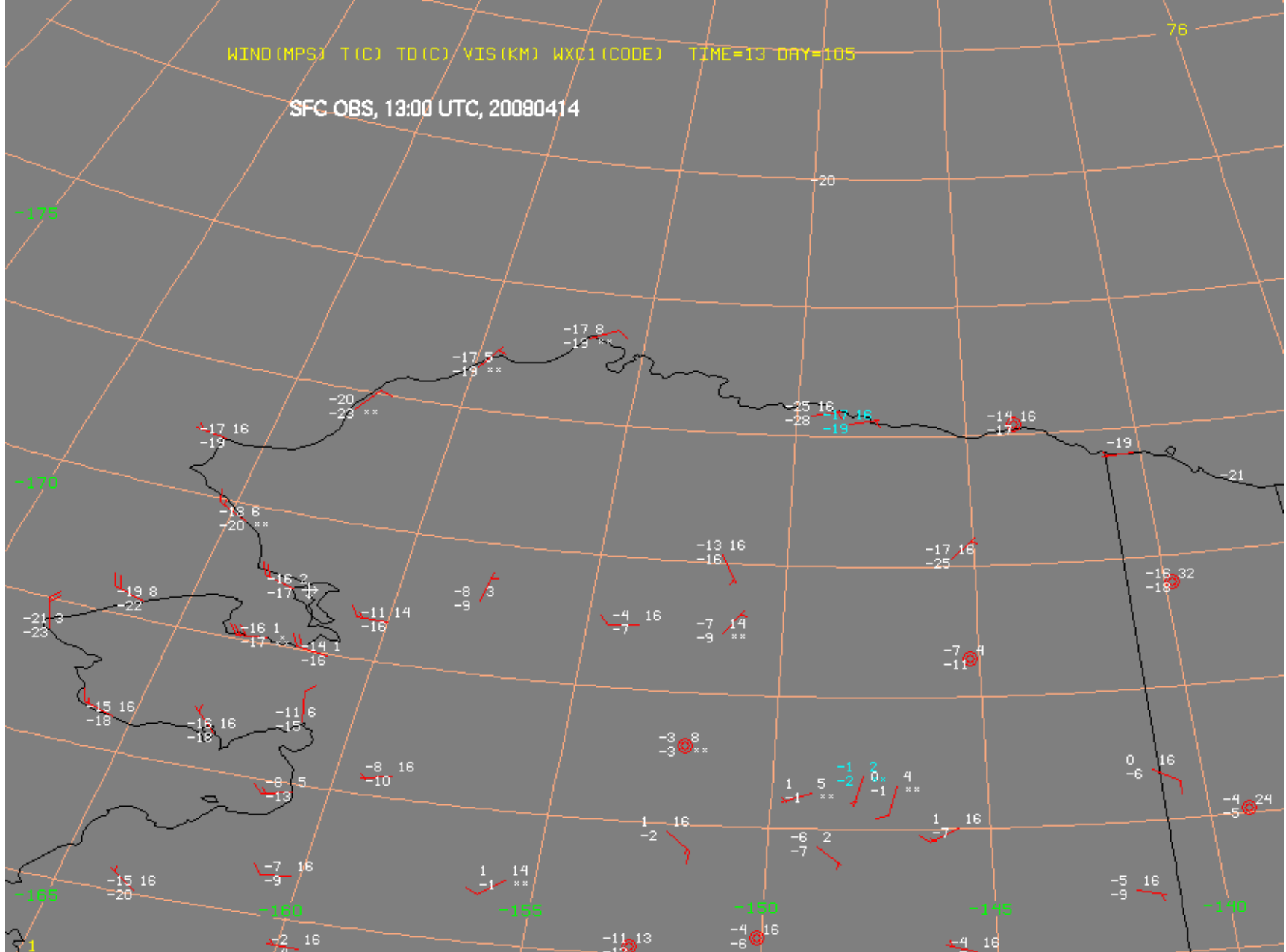


NCEP GFS Wind Flags (knots) on Press = 1000 hPa
Init:2008041406 Valid:2008041606

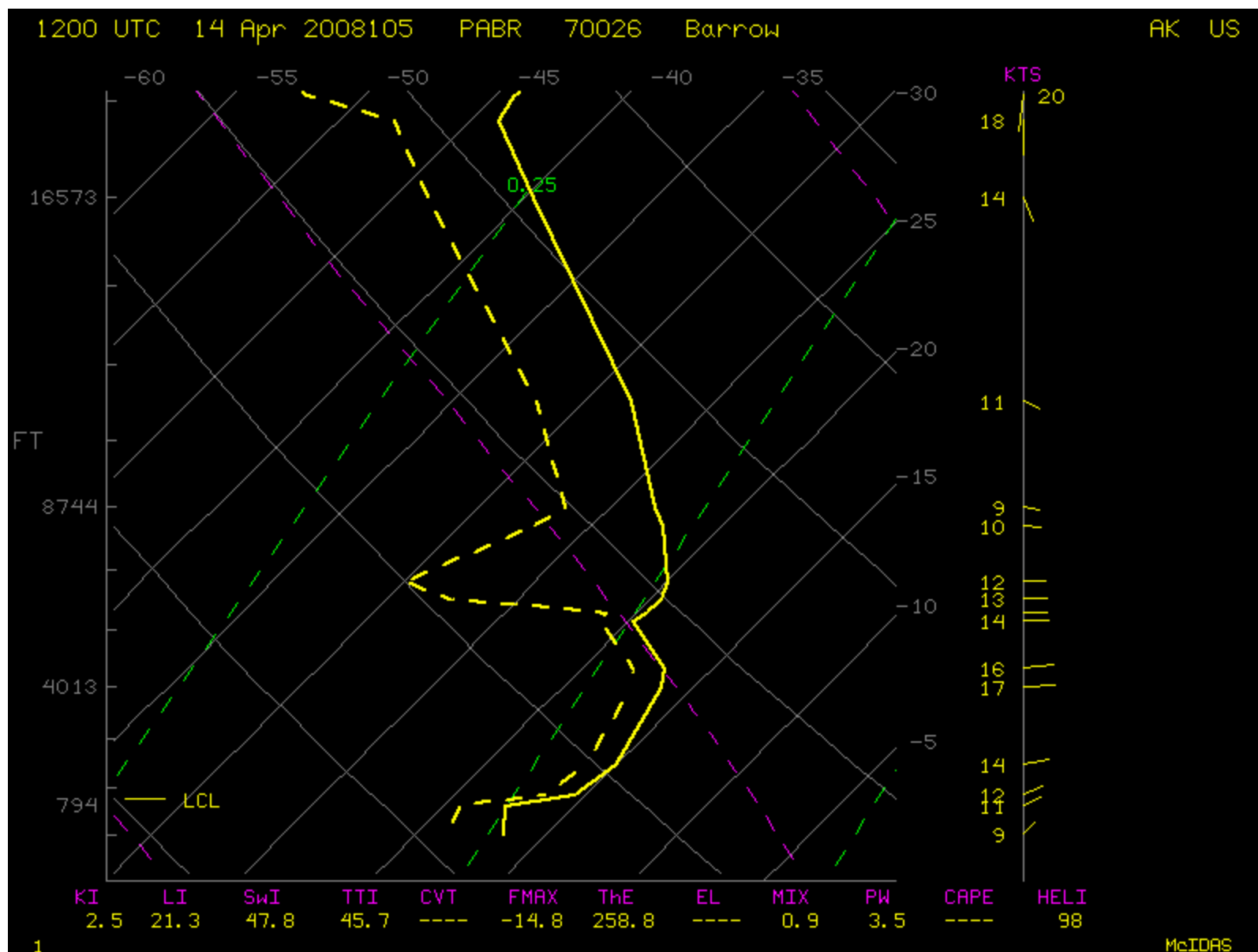


NCEP GFS Wind Flags (knots) on Press = 1000 hPa
Init:2008041406 Valid:2008041612

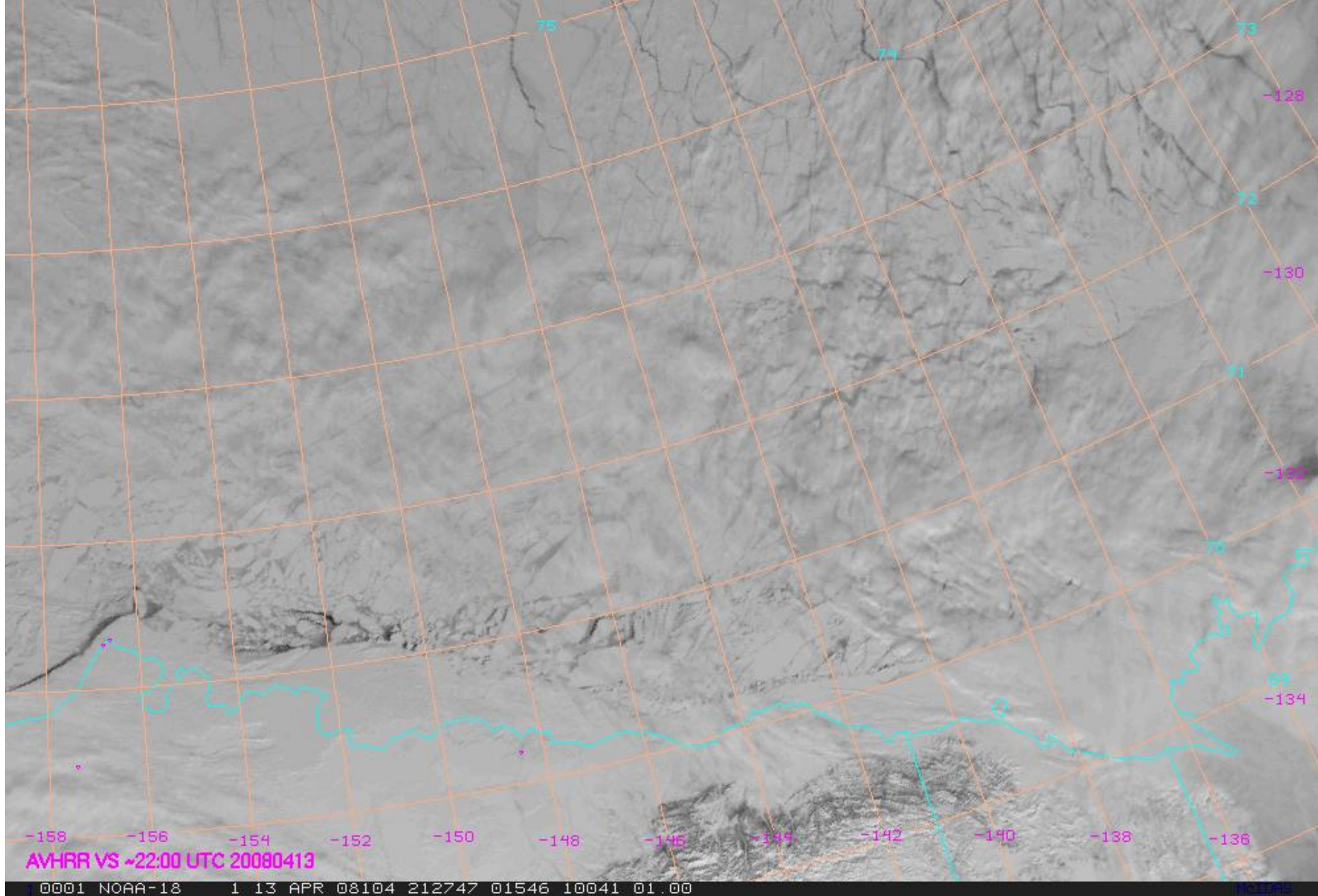




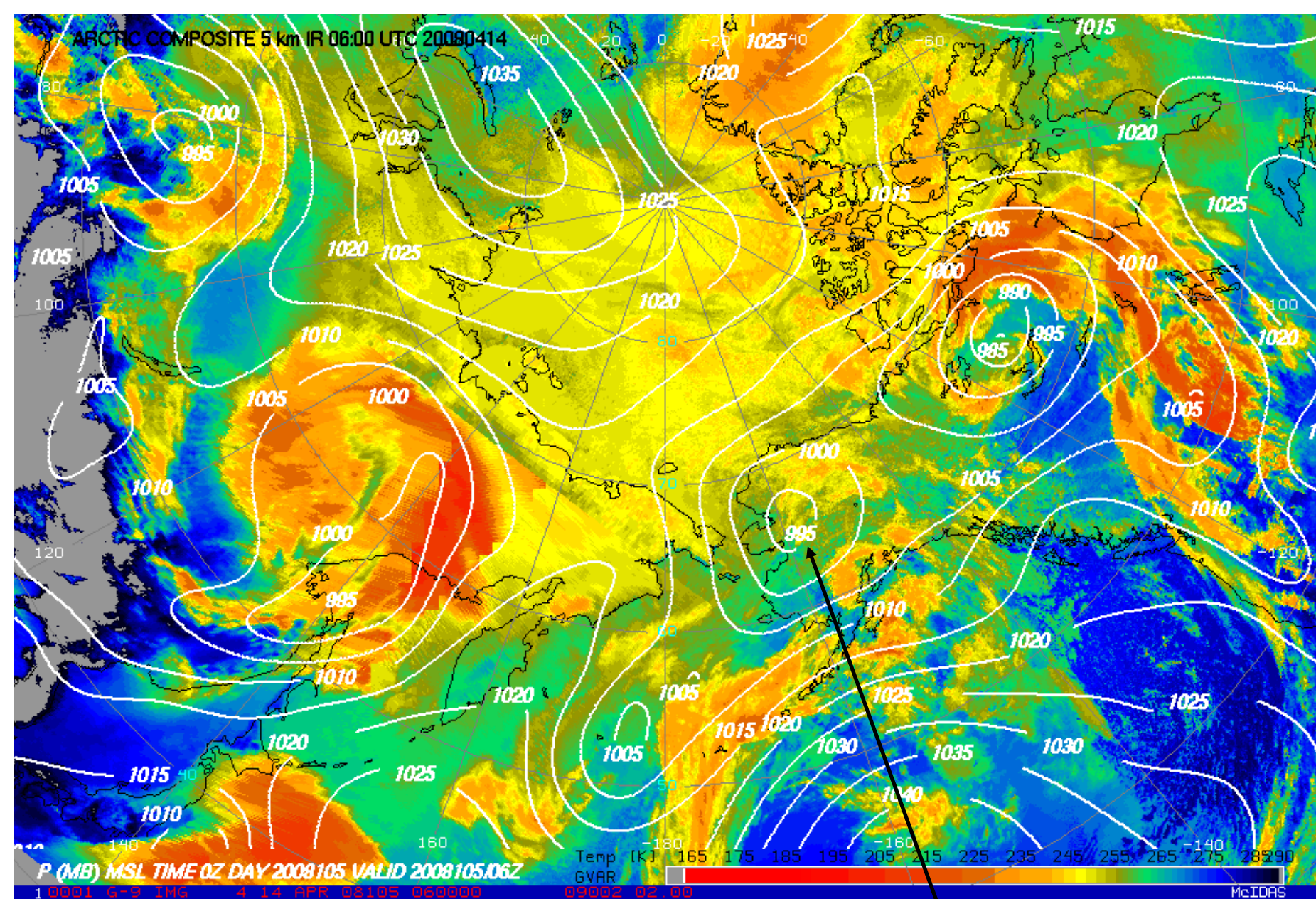
Surface conditions at 5:00 AM local time today, showing snow along coast and over the interior.



This morning's rawinsonde from Barrow.
Near-saturated layer corresponds to cloud in IR imagery,
up to ~5000 feet.

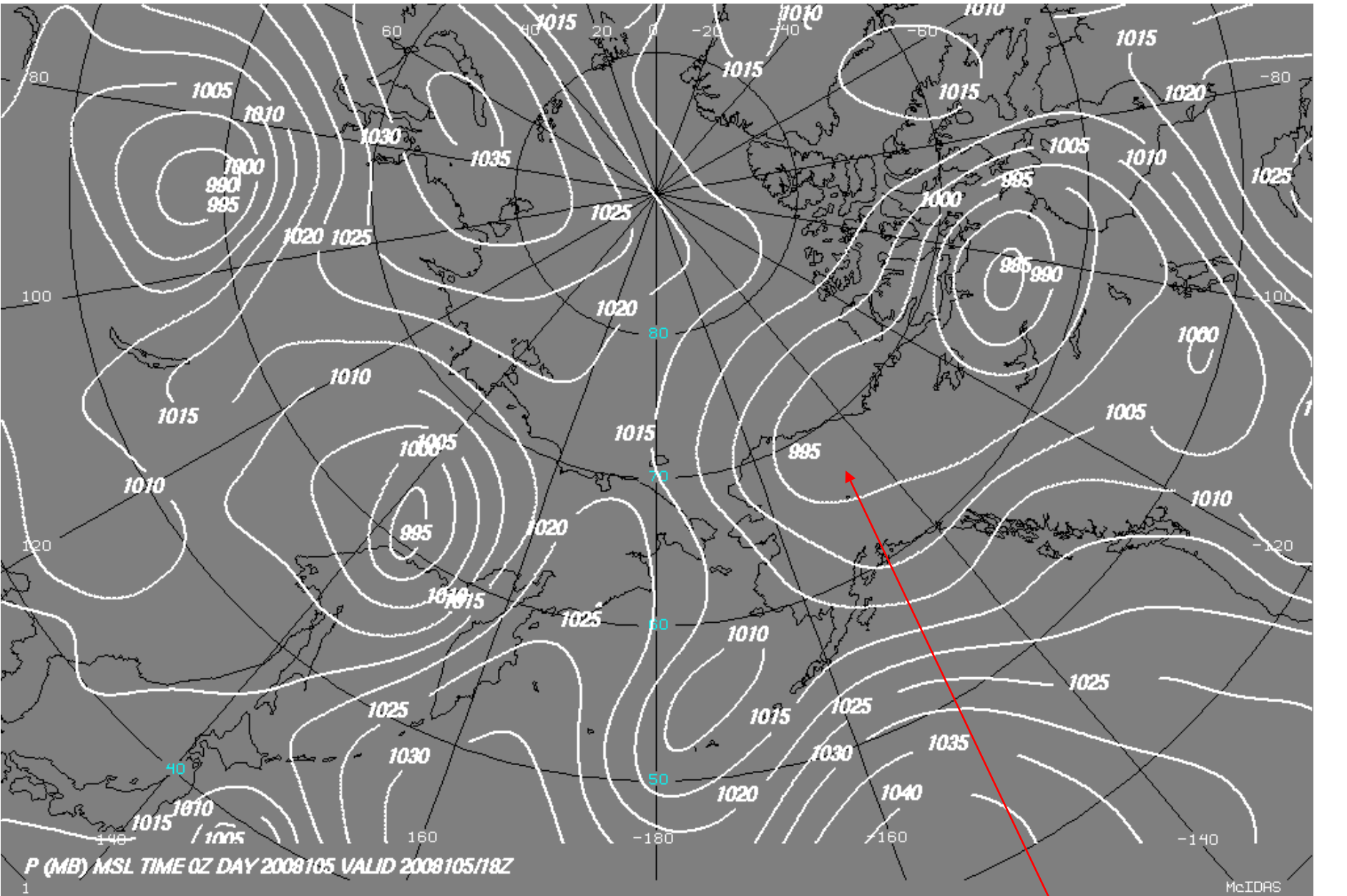


1 km visible image from Sunday afternoon showing that much of the open water along the north coast has frozen over due to cold temps and light winds



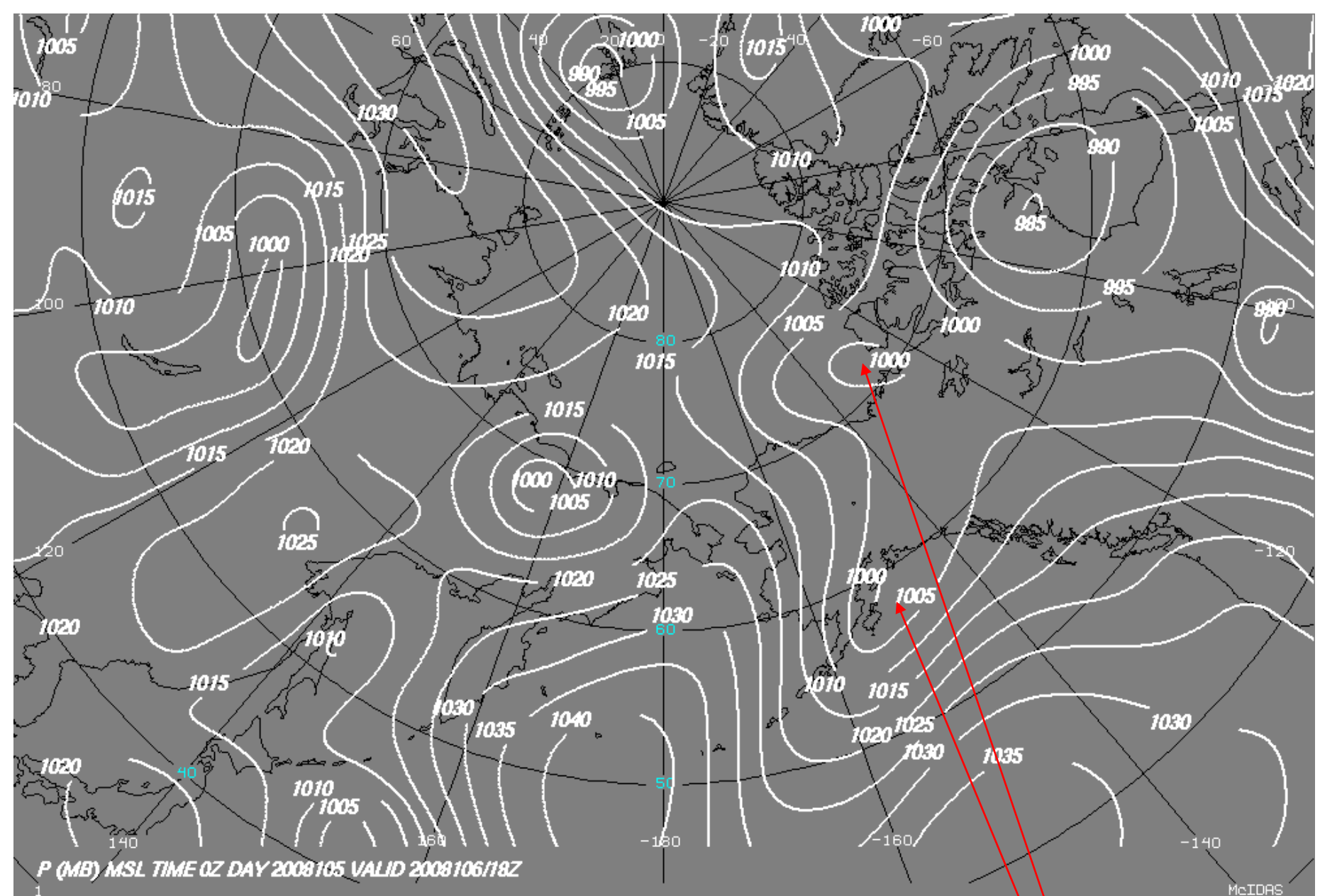
6 UTC, April 14, with GFS MSLP

Our current low



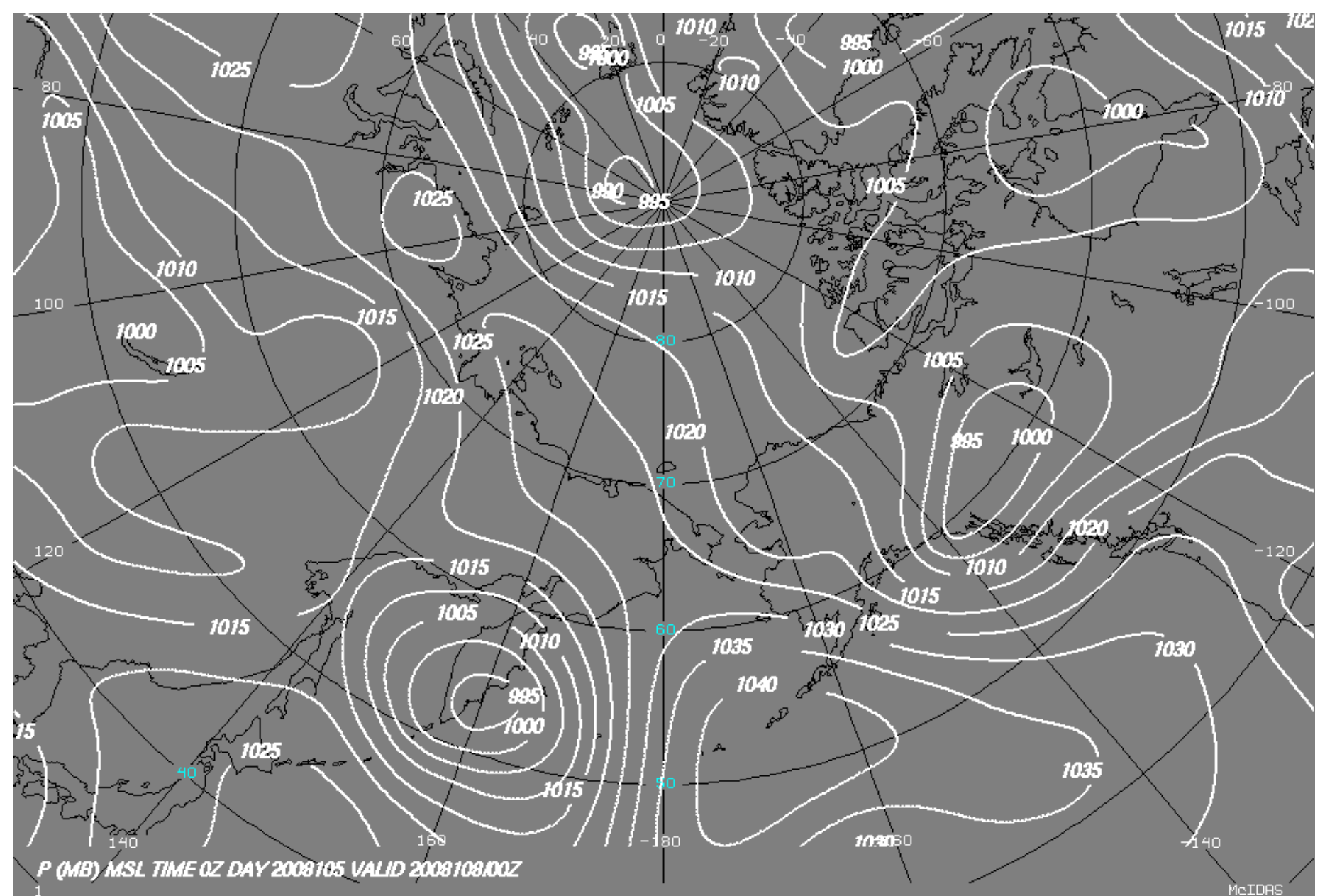
18 UTC, April 14

Our current low fills by later today



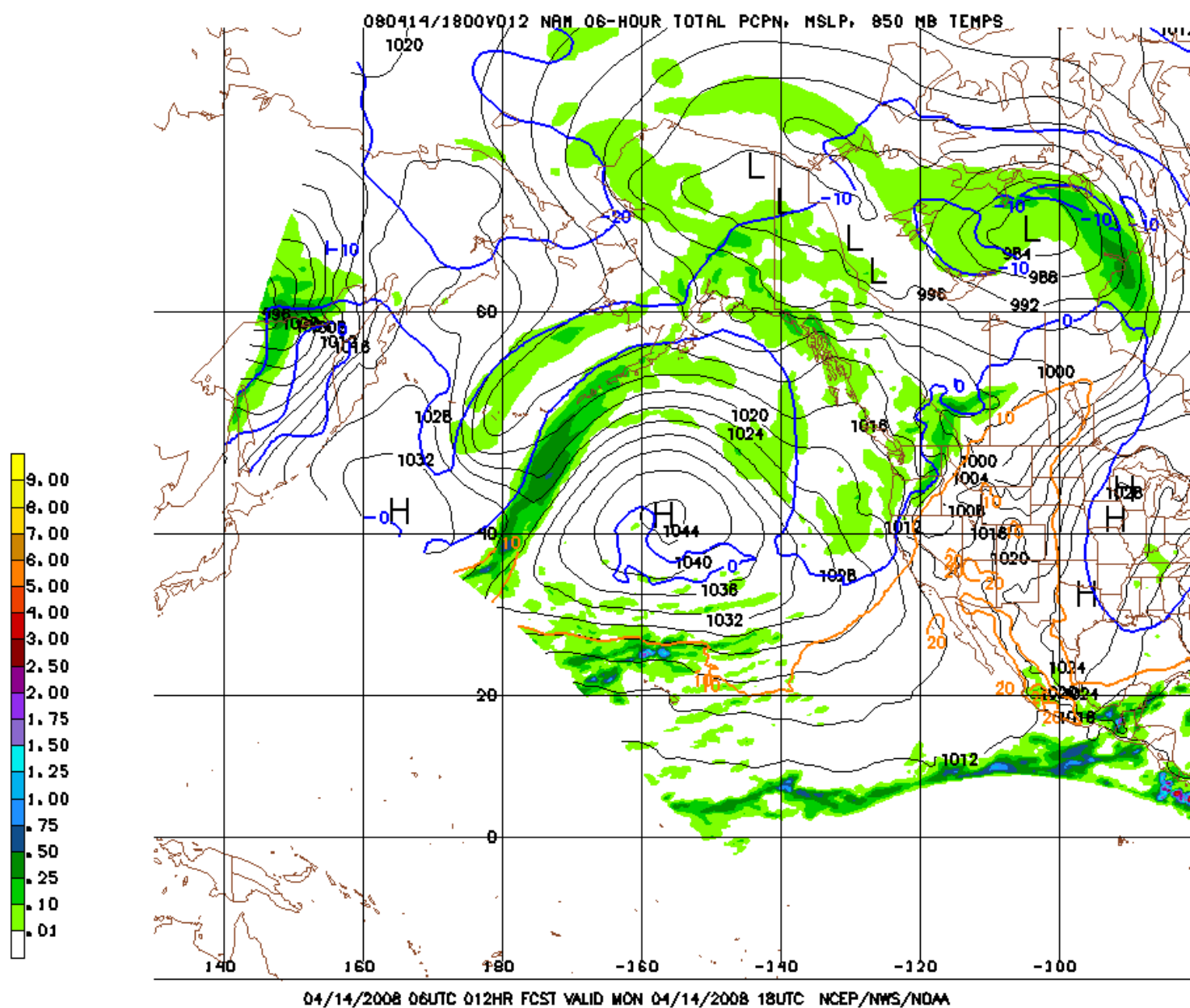
18 UTC, April 15

By Tues morning new lows develop over the Gulf of Alaska and the Beaufort Sea



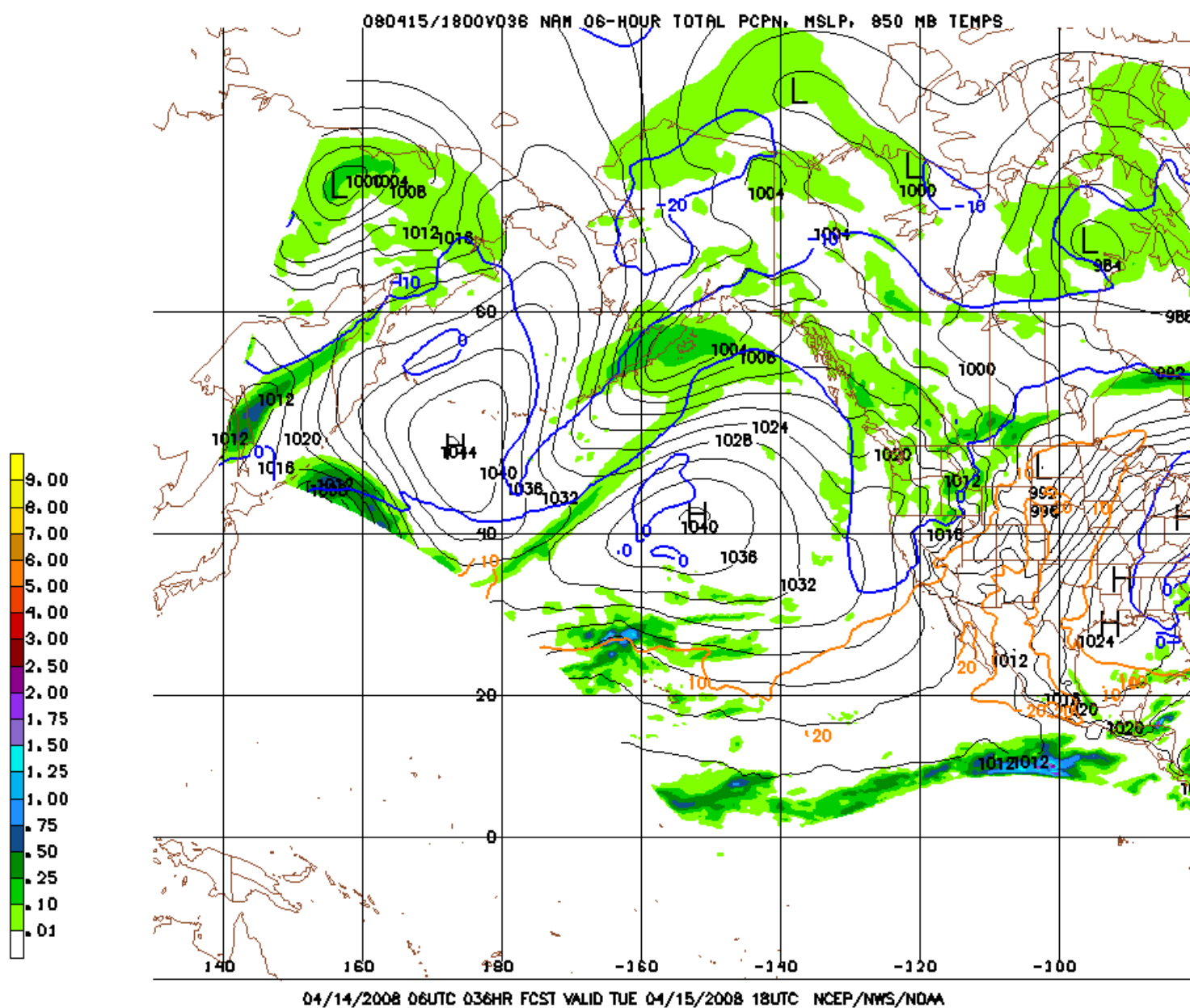
12 UTC, April 16

By early Wed. most of our study region is free from lows, Although the 6 Z GFS and NAM runs show a weak low approaching the northwest coast from Russia.

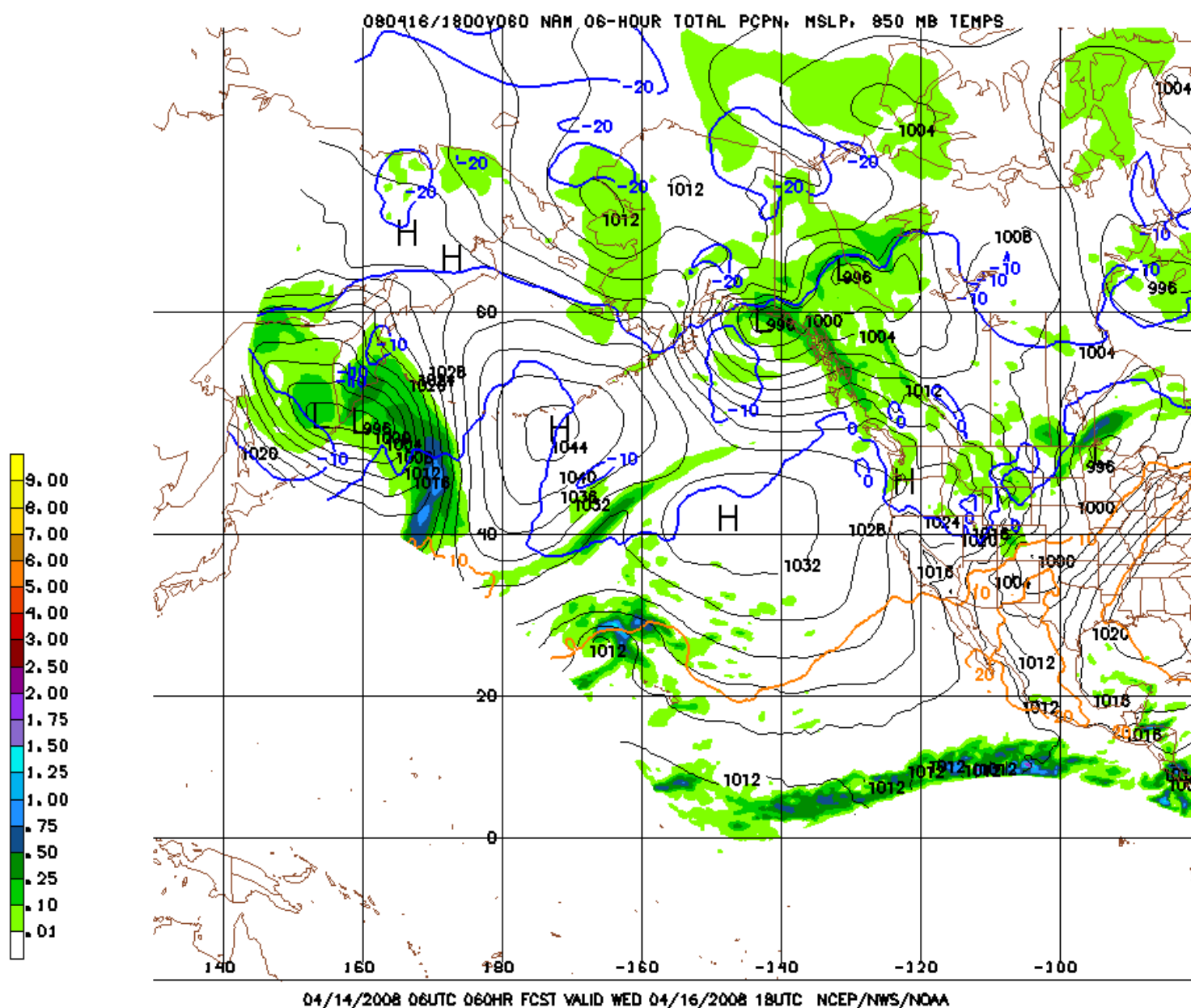


6Z runs of the GFS and NAM are similar for next 3 days.

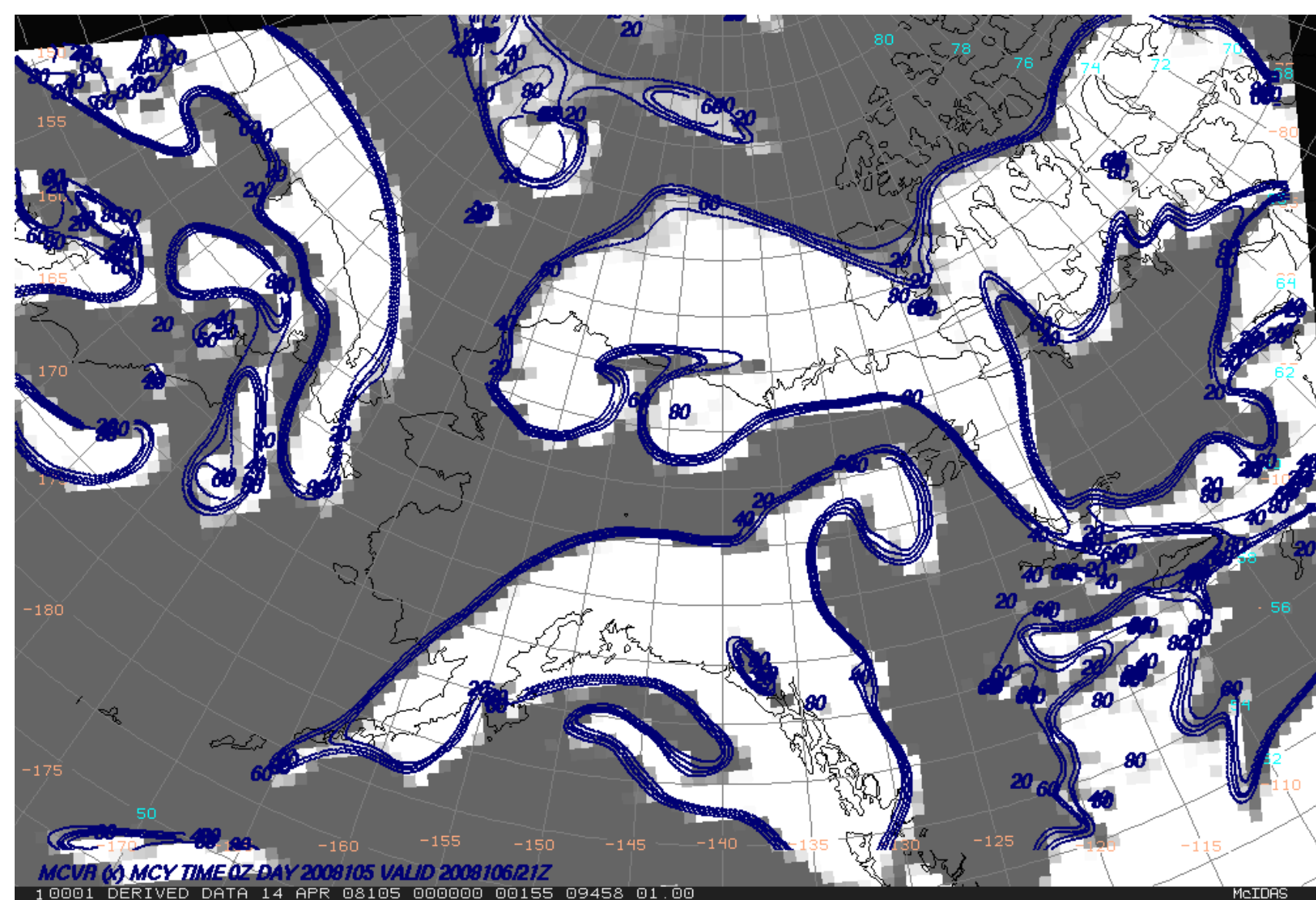
Here the NAM shows precip and MSLP for 10:00 AM local time today



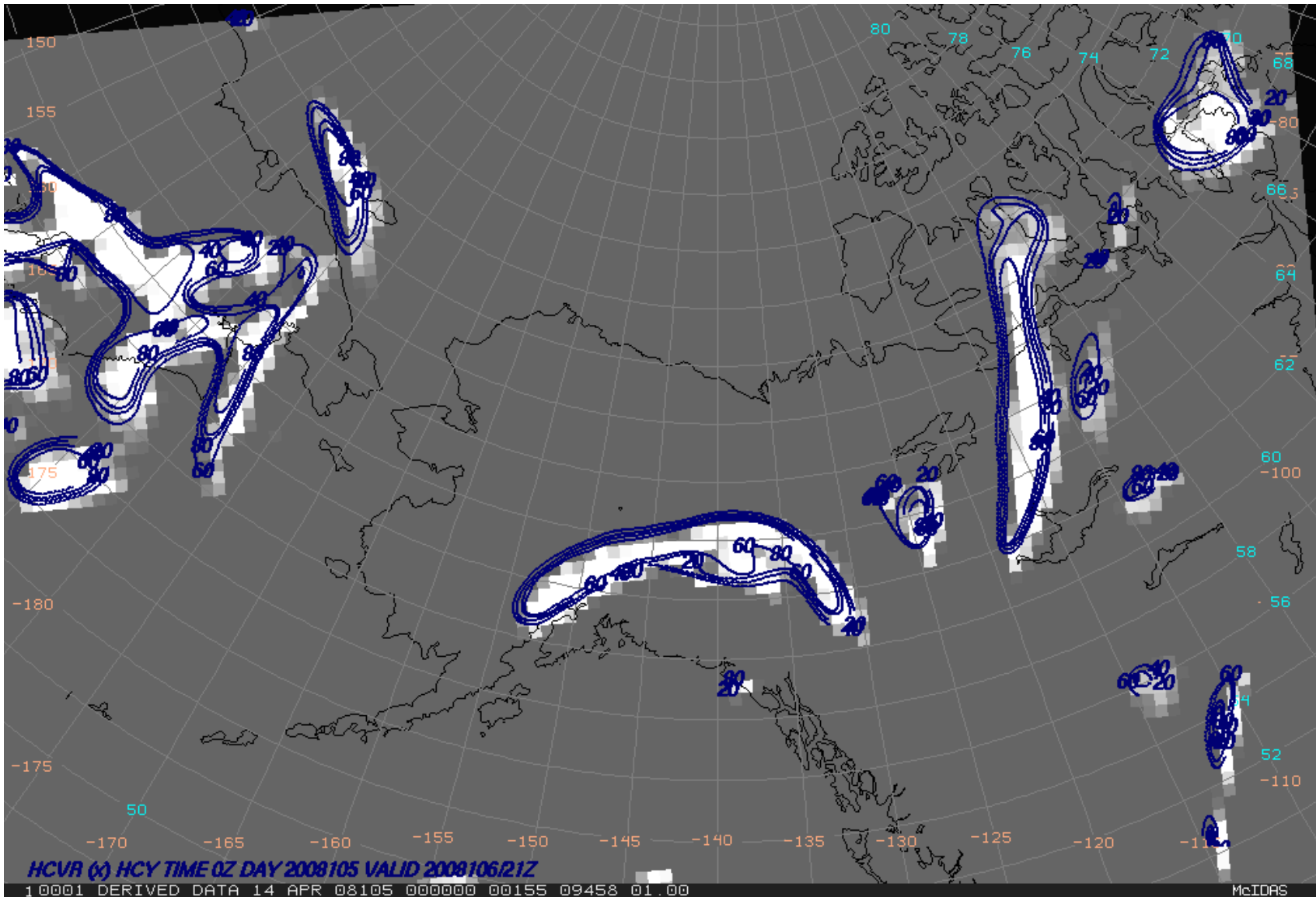
By Tuesday morning light precip. is forecast for most of the Arctic Ocean in our flight range



By Wed. morning light precip. is still forecast for some of the Arctic Ocean in our flight range, but moving out of the study region by late in the day.



NAM mid-level cloud forecast for 1:00 PM local time on Tuesday.
If clear skies are needed, this could be a good opportunity to head
out to the dateline.



NAM high-level cloud forecast for 1:00 PM local time on Tuesday

Tue.10am, Wed.6pm

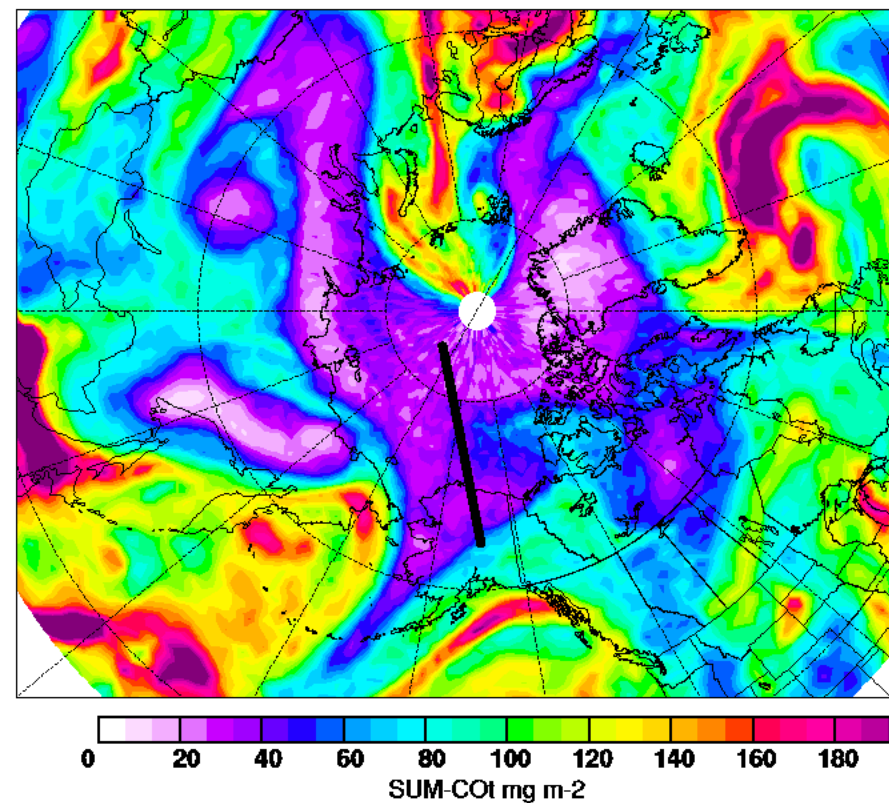
Total CO

Total column of species SUM-CO for age class 0 - 20.00 DAYS

Latest analysis time 20080414. 60000 Actual time 20080415.180000

Mean value 0.867E+02 Maximum value 0.599E+03 Minimum value 0.9

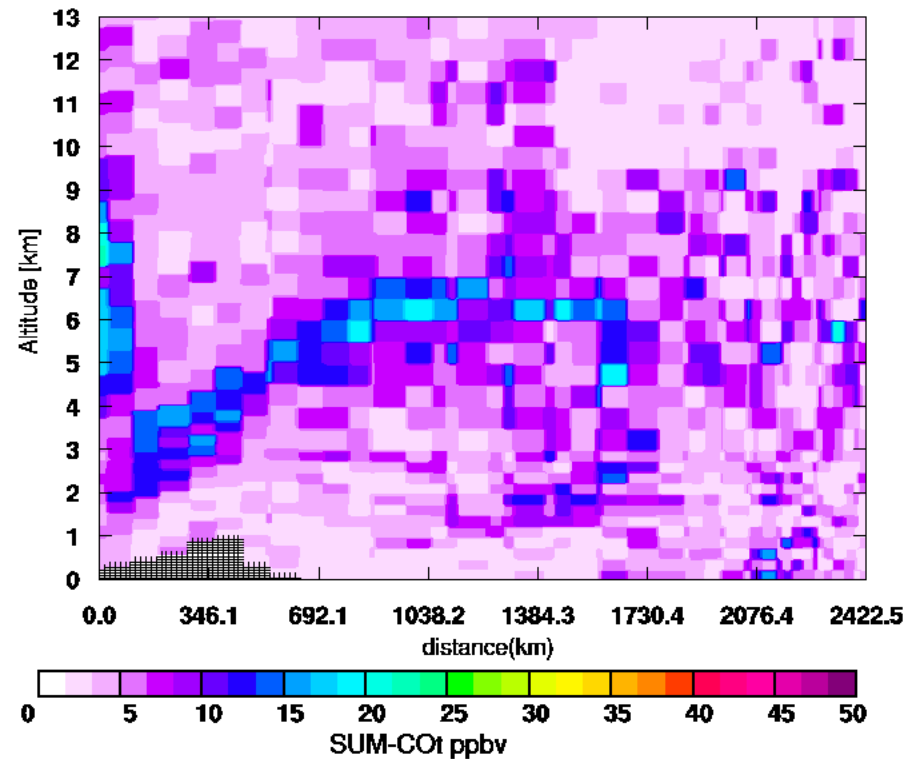
Distance of grid lines 20.0 deg



CROSS SECTION FROM 65 TO 85 LATITUDE AND -149 TO 165 LONGITUDE

NA-CO_t MIXING RATIO FOR AGE CLASS 0 - 20.00 DAYS

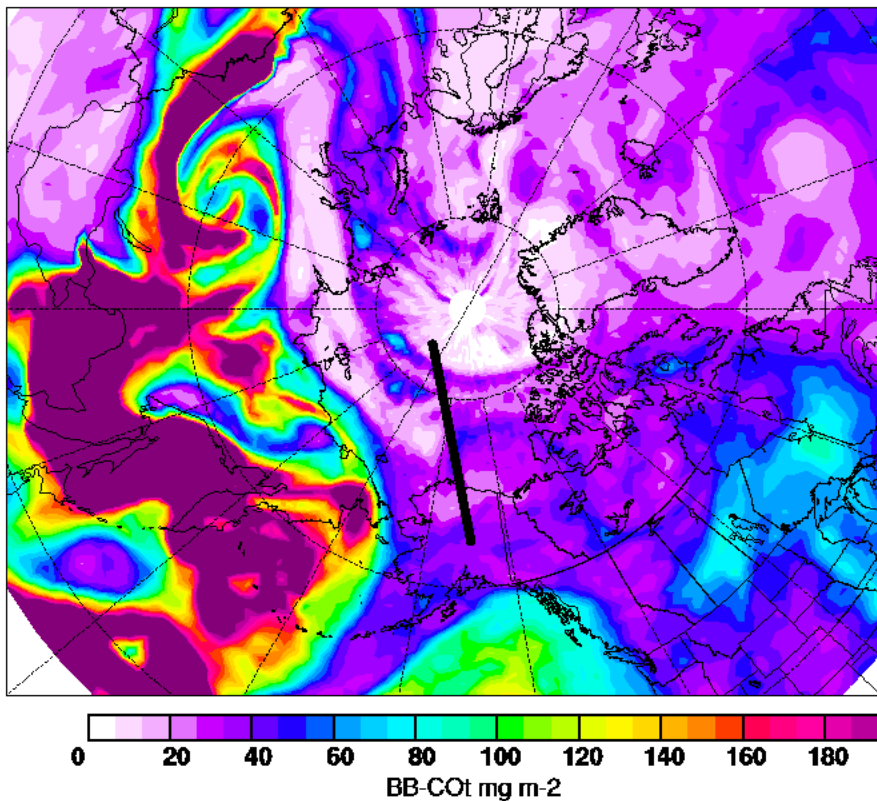
LATEST ANALYSIS 20080414 60000 UTC ACTUAL TIME 20080415 18



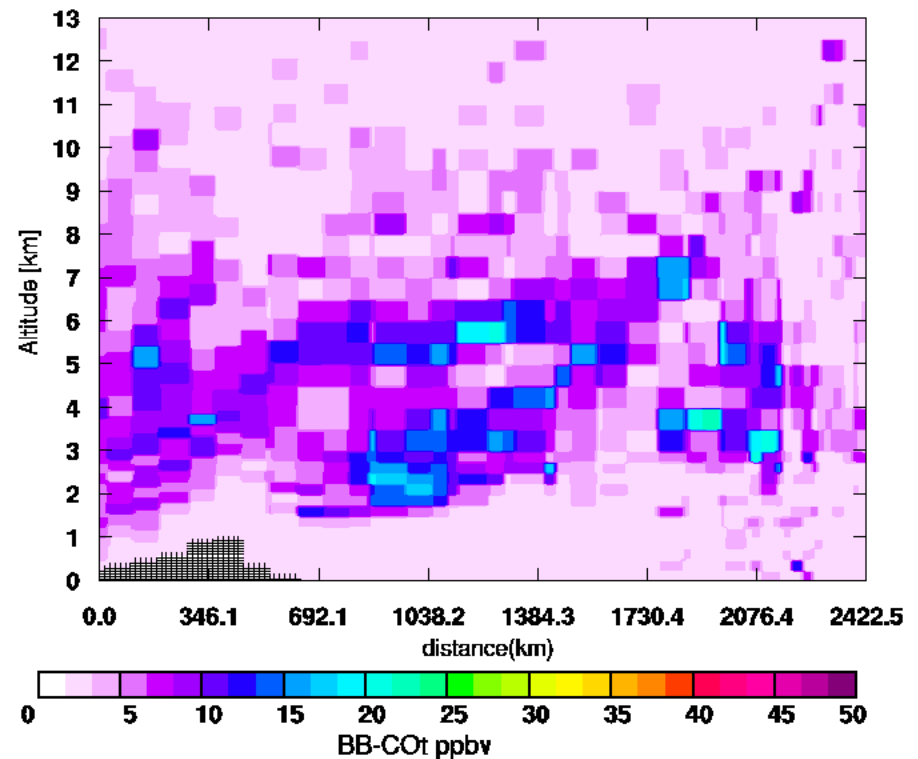
Tue.10am, Wed.6pm

Biomass Burning

Total column of species BB-COt for age class 0 - 20.00 DAYS
Latest analysis time 20080414. 60000 Actual time 20080415.180000
Mean value 0.611E+02 Maximum value 0.110E+04 Minimum value 0.1
Distance of grid lines 20.0 deg

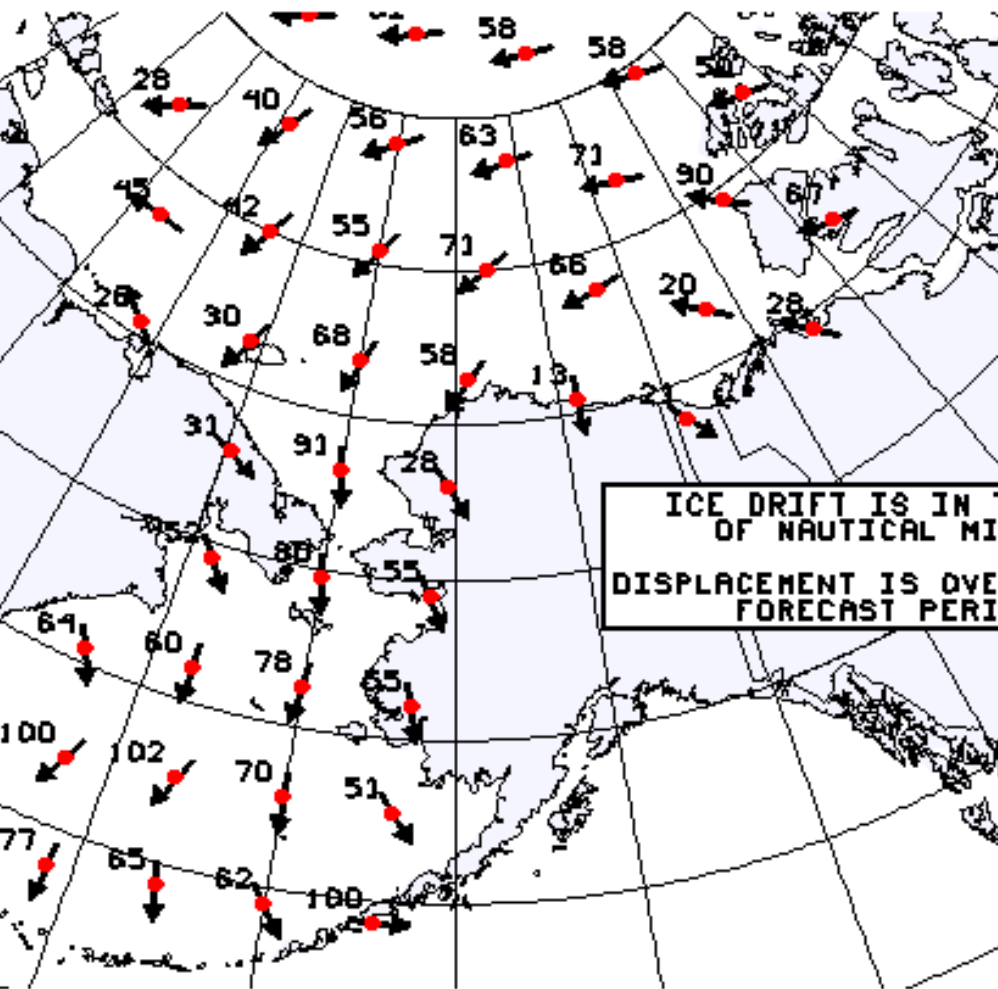


CROSS SECTION FROM 65 TO 85 LATITUDE AND -149 TO 165 LONGITUDE
BB-COt MIXING RATIO FOR AGE CLASS 0 - 20.00 DAYS
LATEST ANALYSIS 20080414 60000 UTC ACTUAL TIME 20080415 18



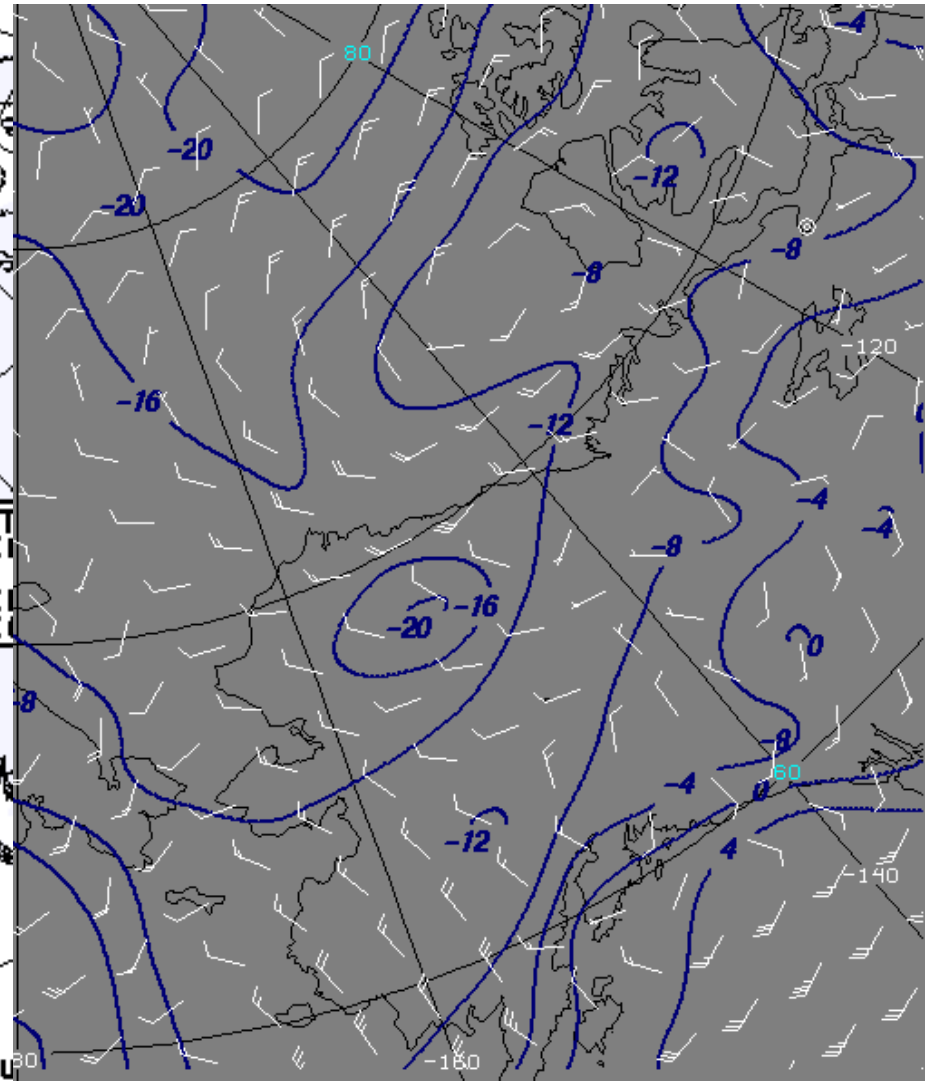
Tue. 4pm.

Ice drift product



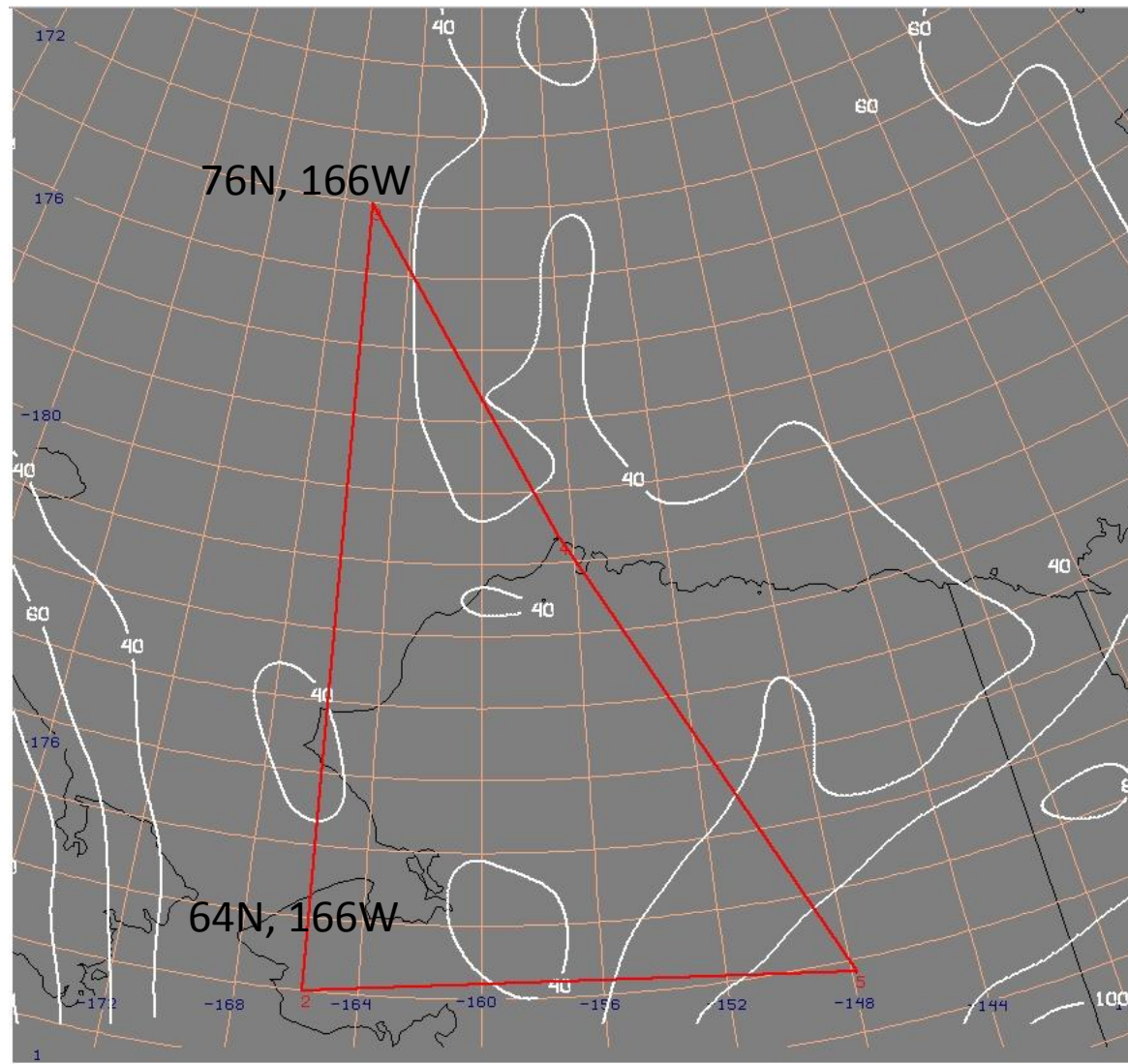
ICE DRIFT (10xNM) 048HR FCST VALID 2008/04/16 000

Surface Temperature, wind.



SFC MBATIME 6Z DAY 2008105 VALID 200810700Z

Flight plan for Tue. (take off at 10am)



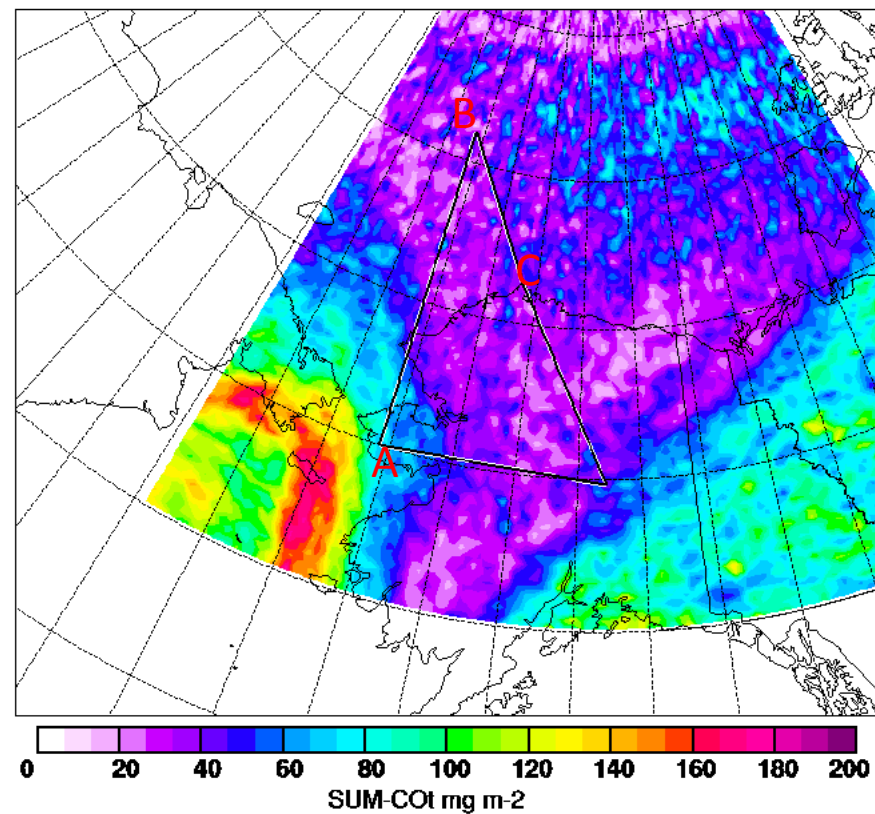
Total anthropo. CO

al column of species SUM-CO for age class 0 - 20.00 DAYS

Latest analysis time 20080414. 60000 Actual time 20080416. 0

Mean value 0.518E+02 Maximum value 0.182E+03 Minimum value 0.239E+01

Distance of grid lines 5.0 deg

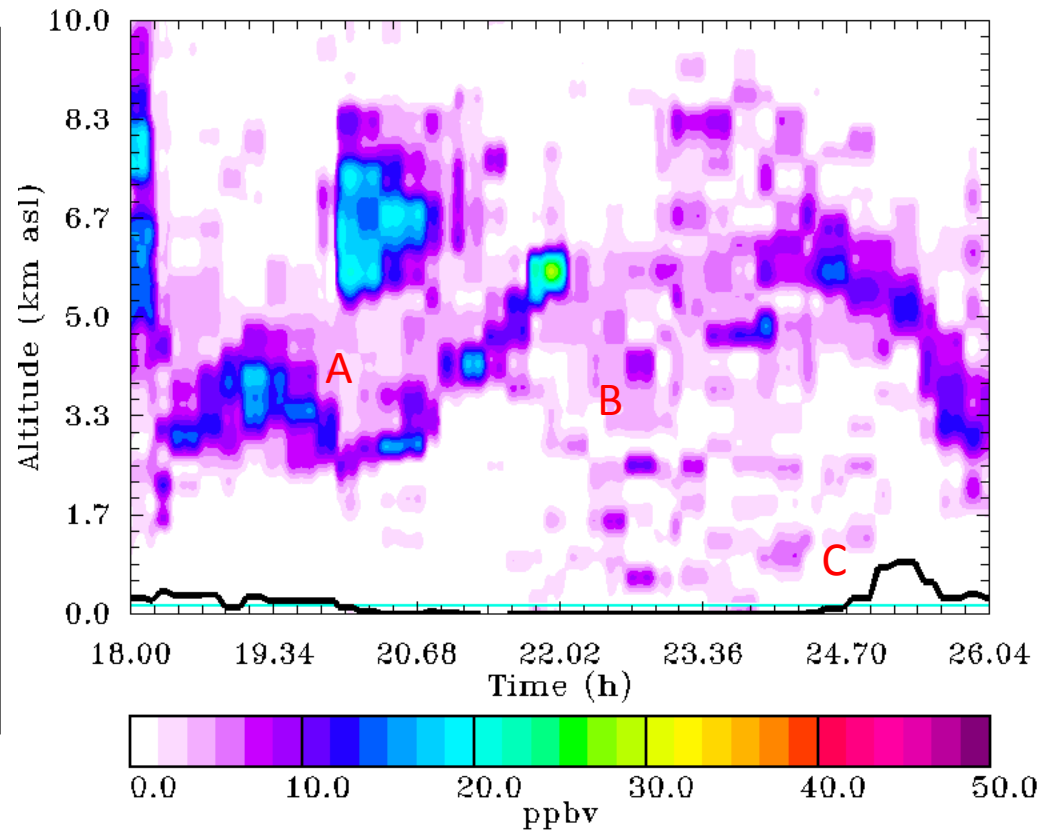


Tracer profile

Date: 20080414 90000

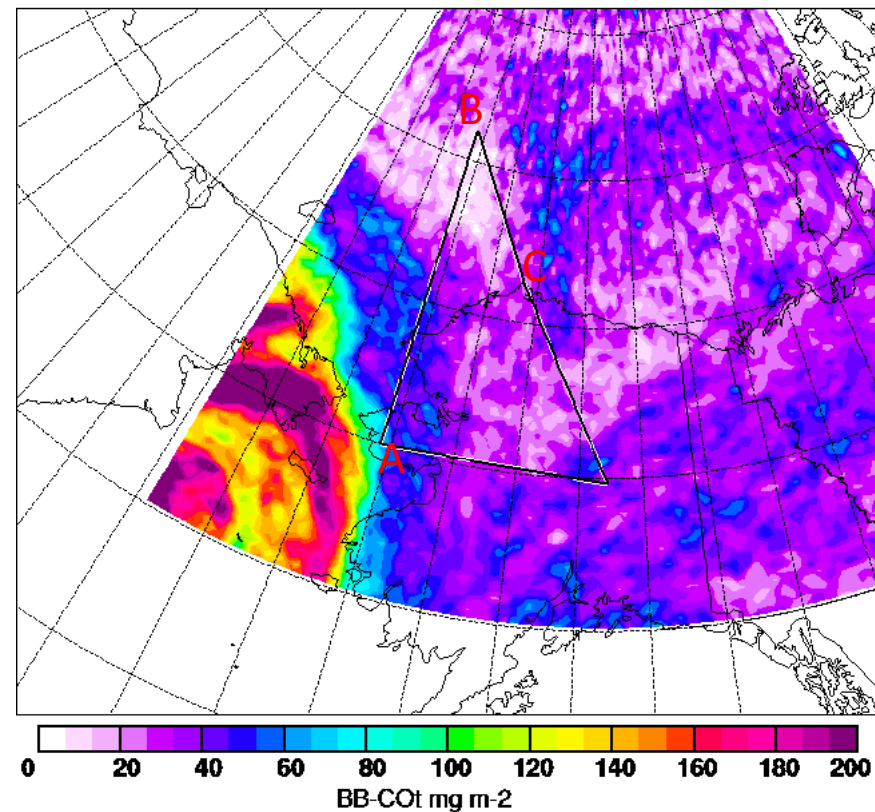
Start: + 0 d 18 h End: + 1 d 2 h

Mean value: 4.690
Maximum value: 28.019
Minimum value: 0.001



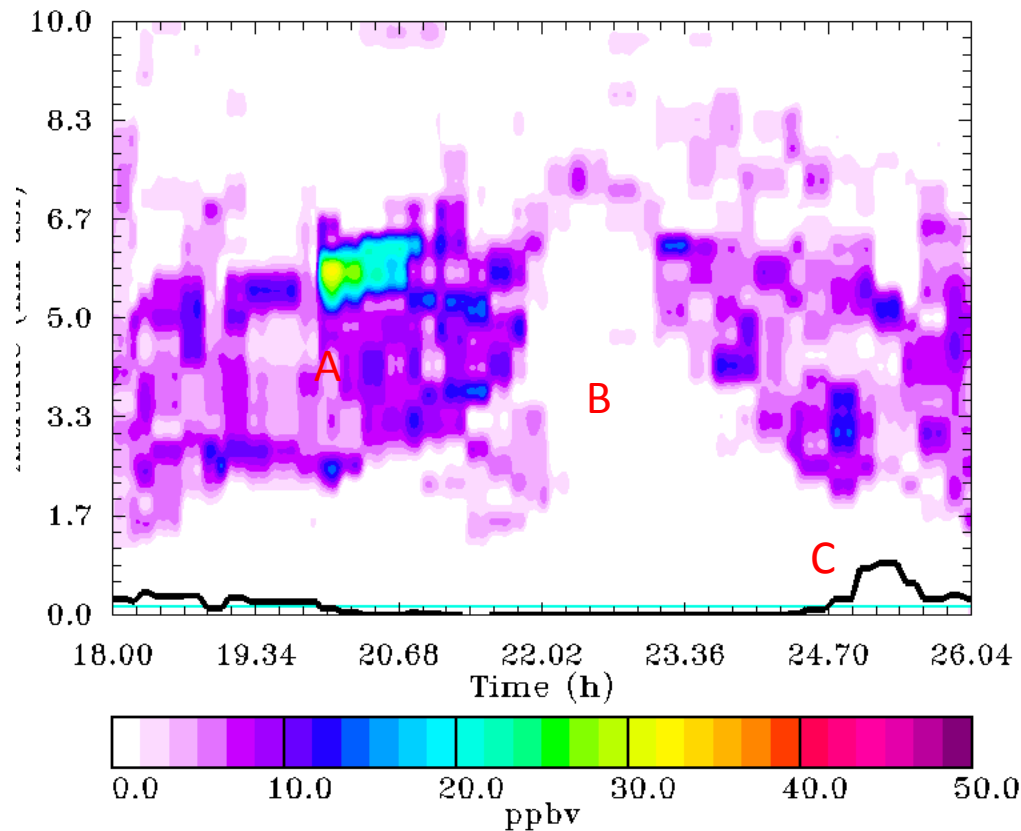
Biomass Burning plume

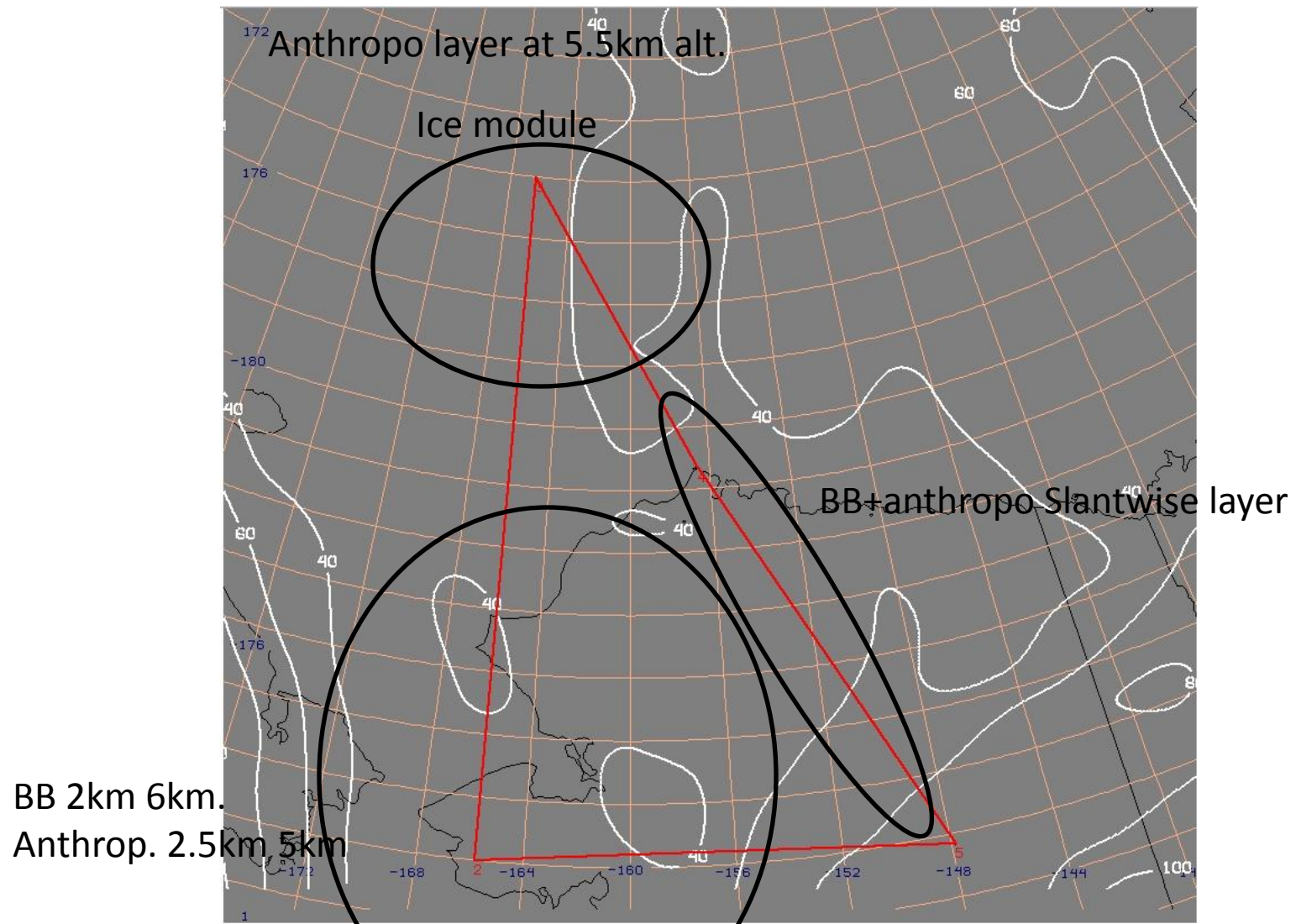
all column of species BB-CO_t for age class 0 - 20.00 DAYS
Latest analysis time 20080414. 60000 Actual time 20080416. 0
min value 0.390E+02 Maximum value 0.284E+03 Minimum value 0.000E+00
Distance of grid lines 5.0 deg



Tracer profile

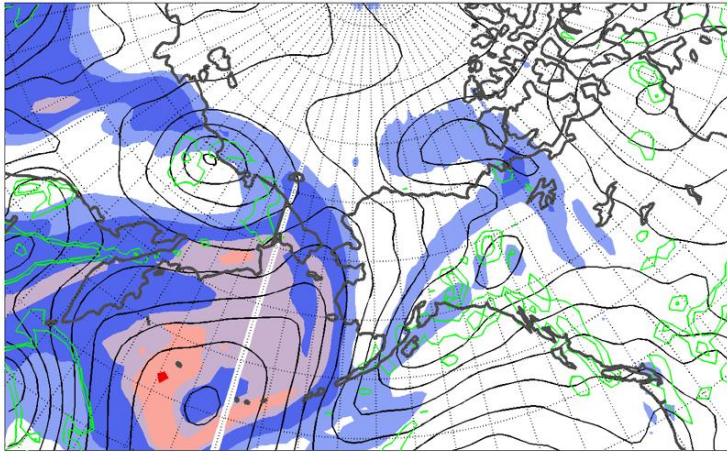
Date: 20080414 90000
Start: + 0 d 18 h End: + 1 d 2 h
Mean value: 4.238
Maximum value: 30.900
Minimum value: 0.000



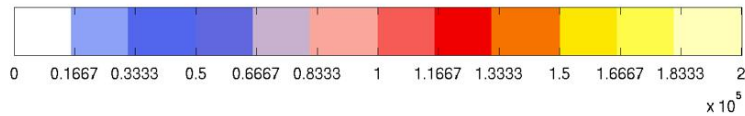
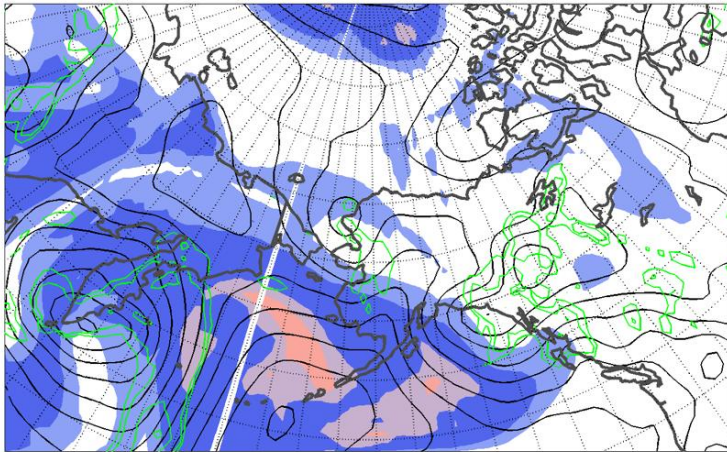


EU CO

EU-CO on 21 UTC 2008-04-15 at level Total column

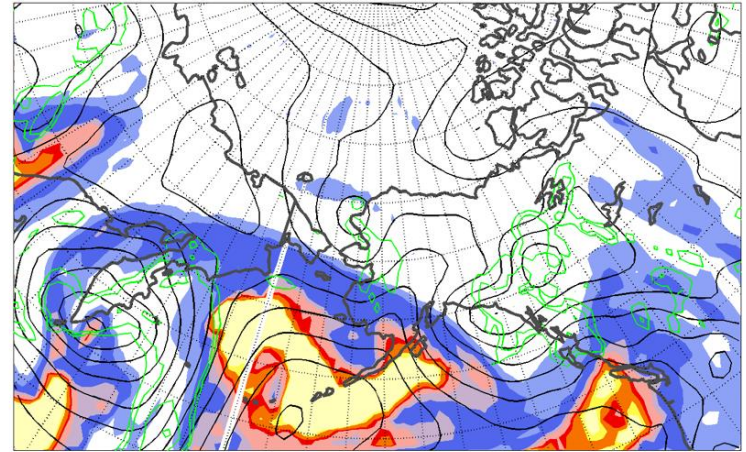


EU-CO on 21 UTC 2008-04-16 at level Total column

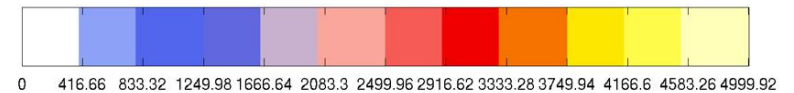
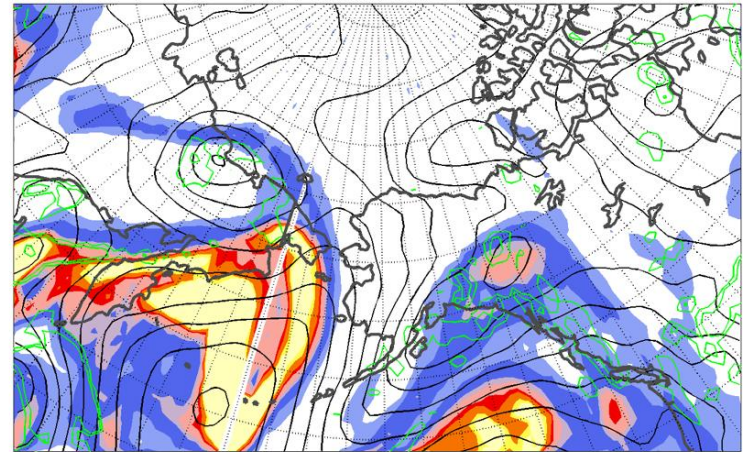


AS SO4

AS-SO4 on 21 UTC 2008-04-16 at level Total column

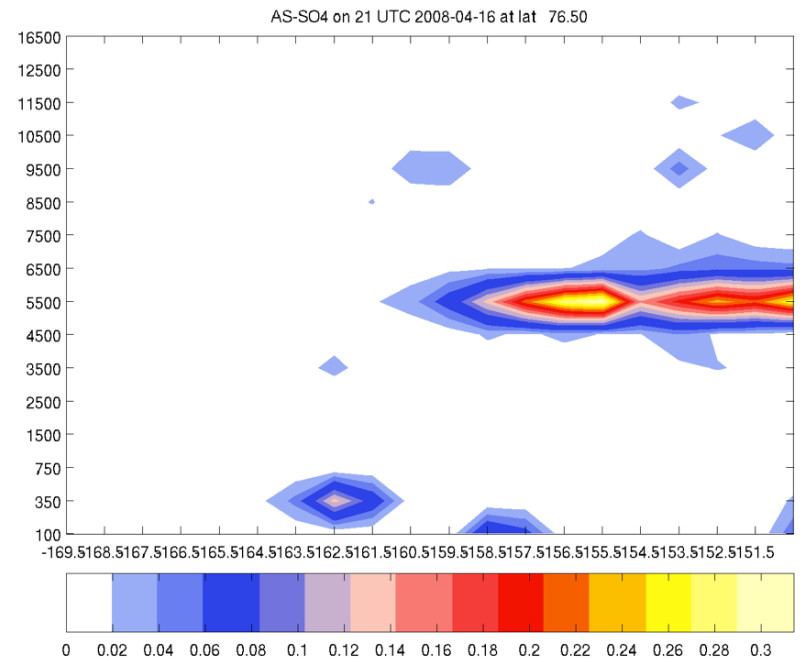
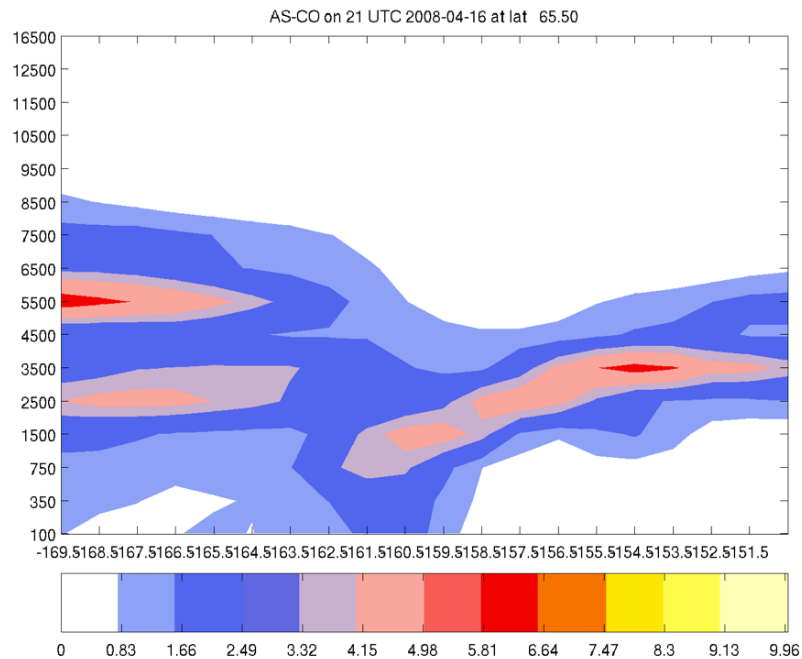
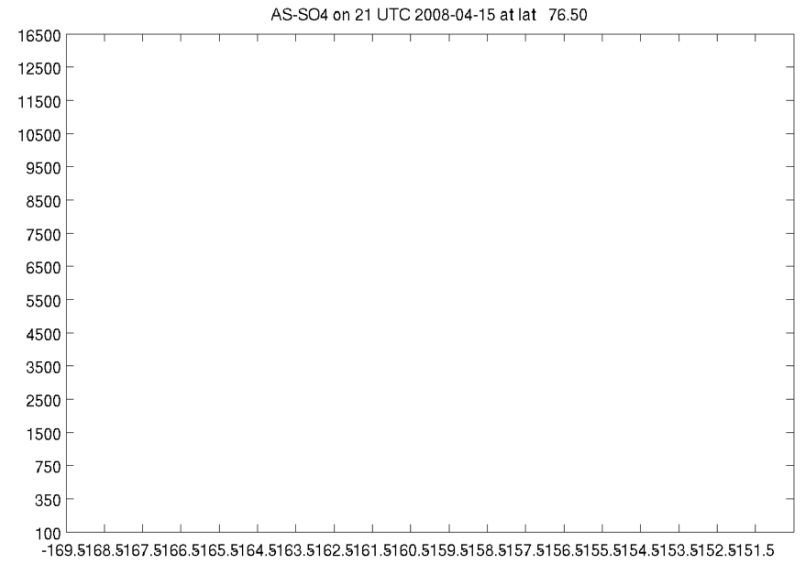
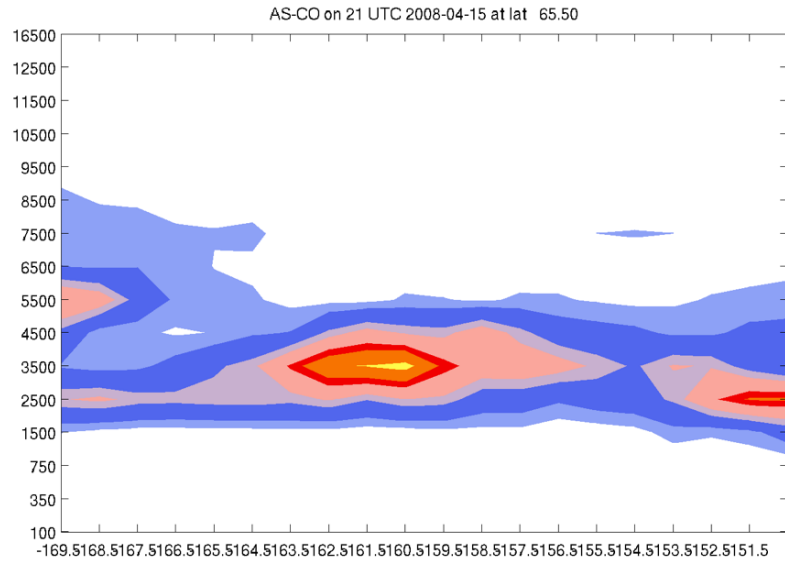


AS-SO4 on 21 UTC 2008-04-15 at level Total column

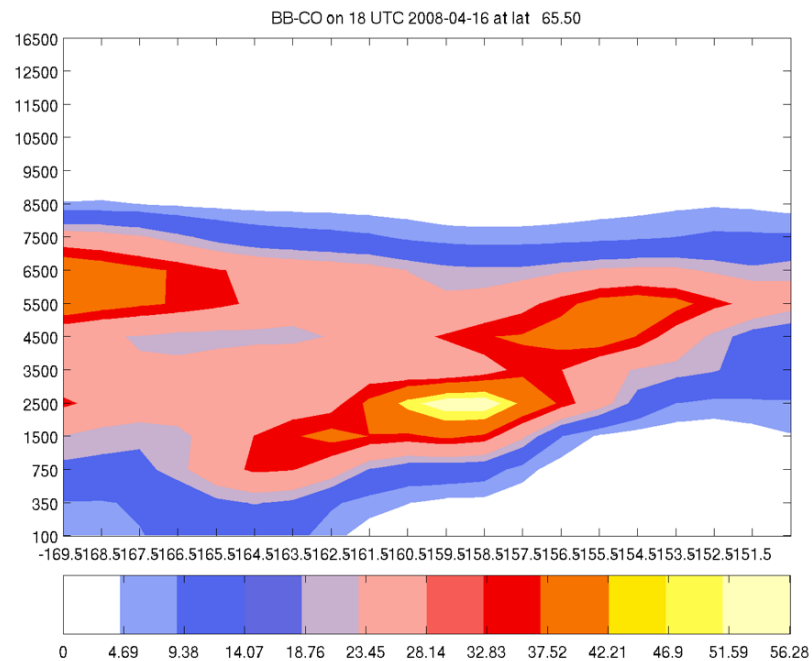
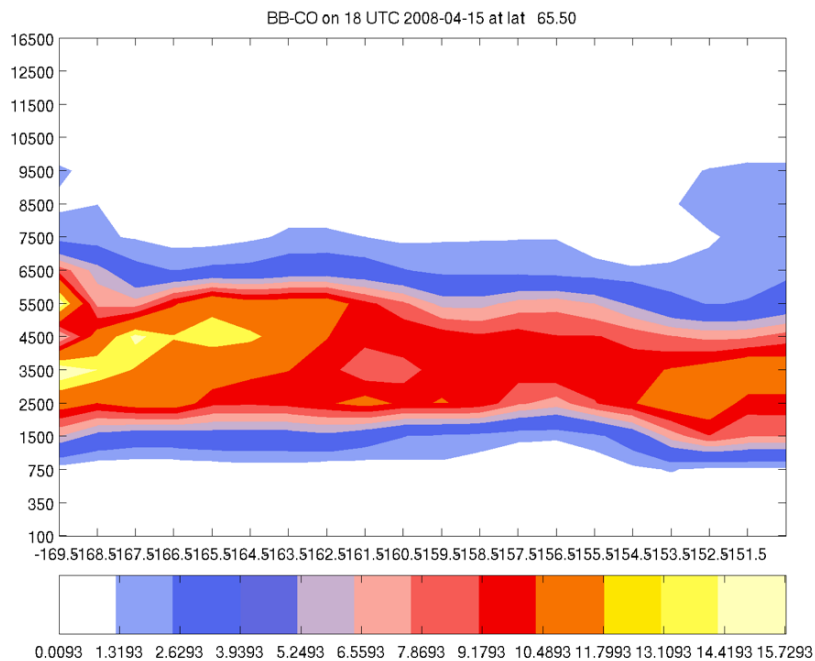


Asian CO

Asian SO4



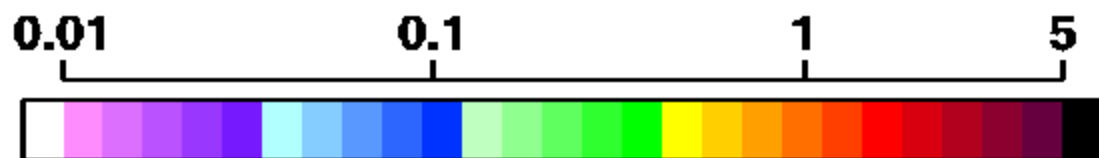
Biomass burning CO



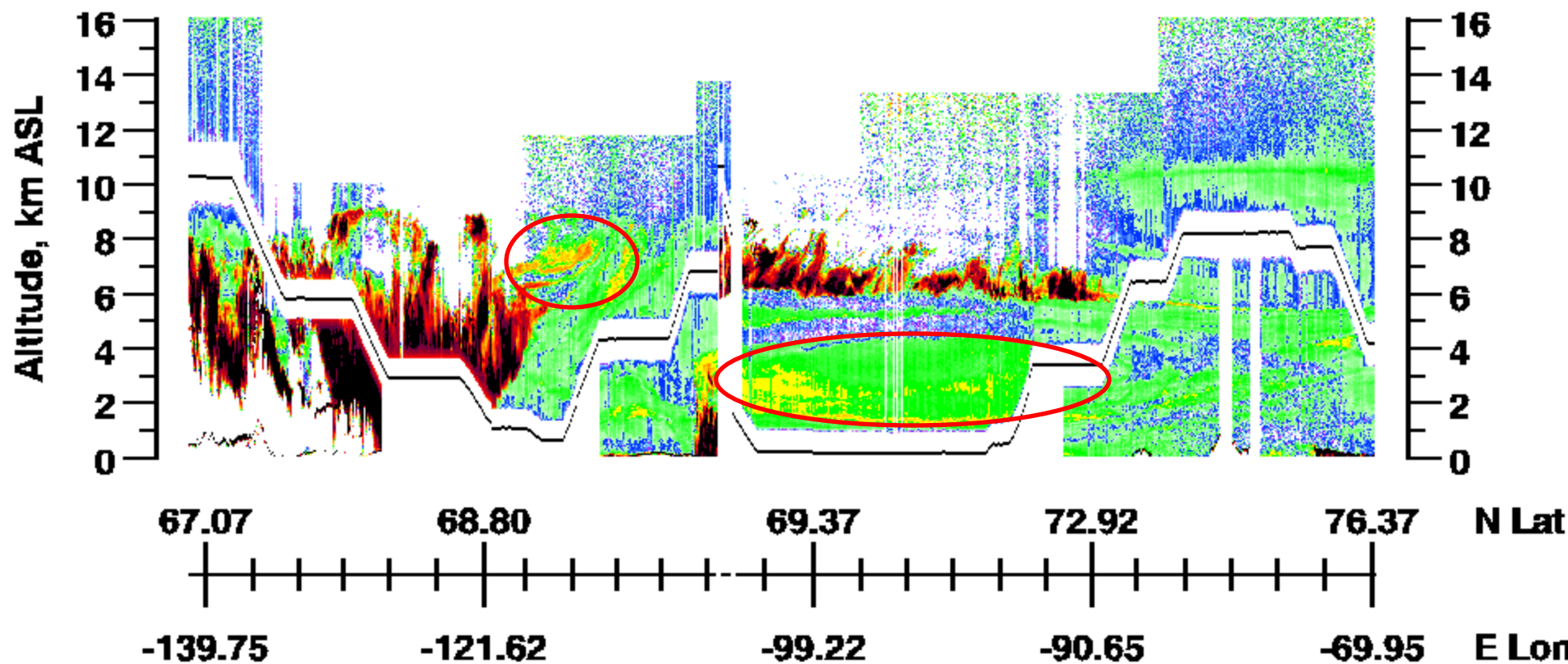
RAQMS Fairbanks Local FX Discussion:

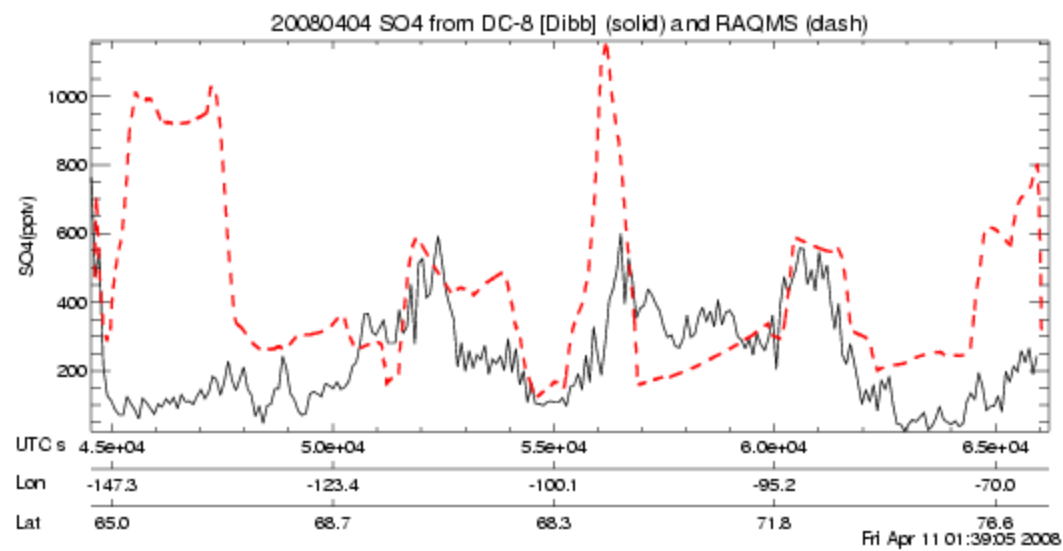
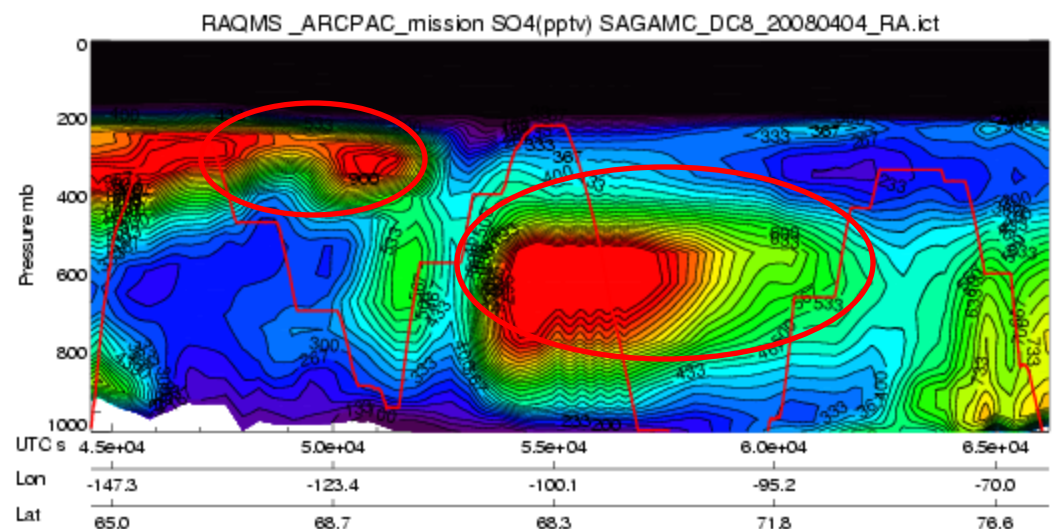
**00Z 04/15-04/18
Initialized 12Z 04/13**

Aerosol Scattering Ratio (591 nm)

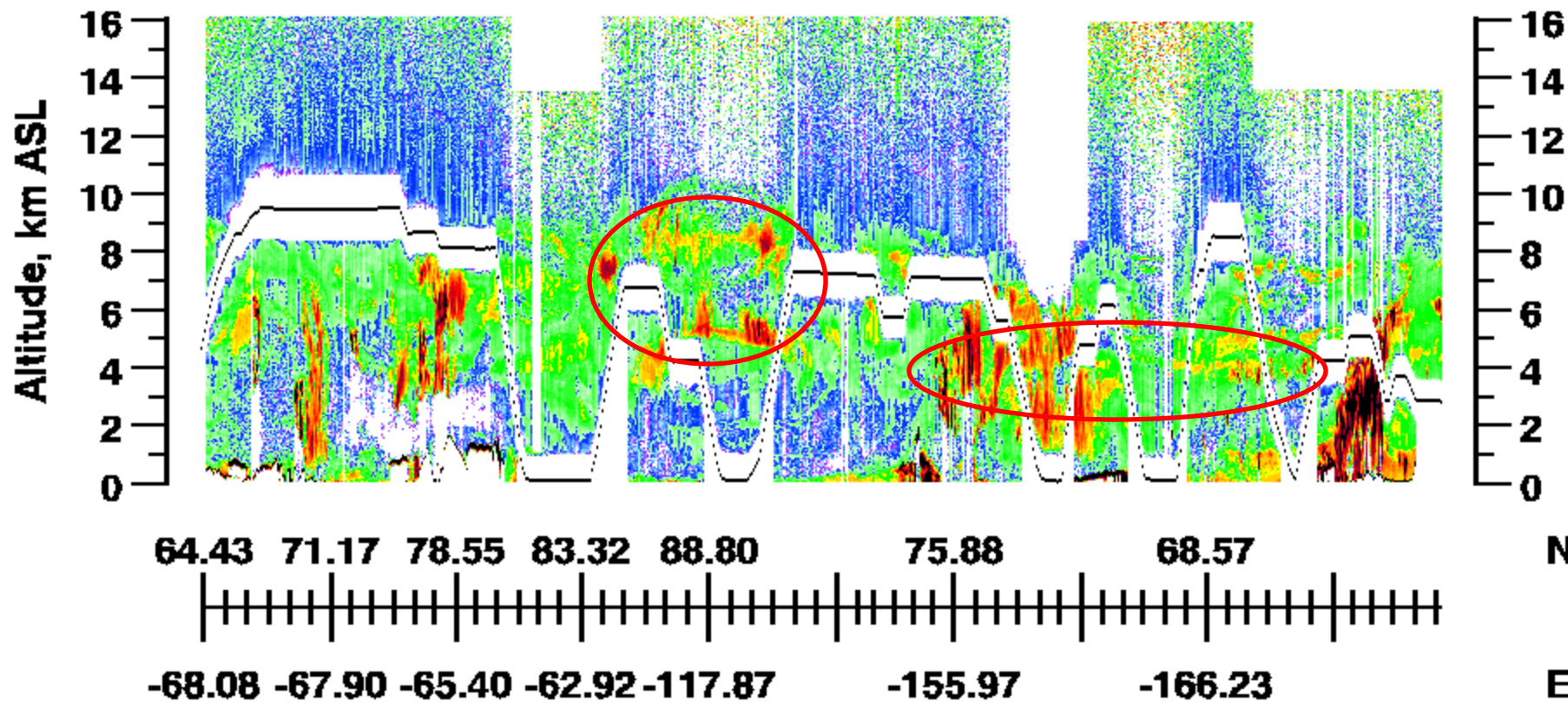
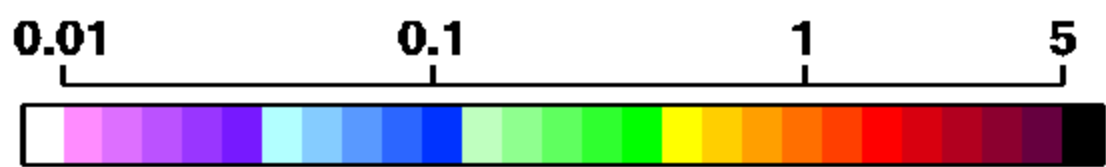


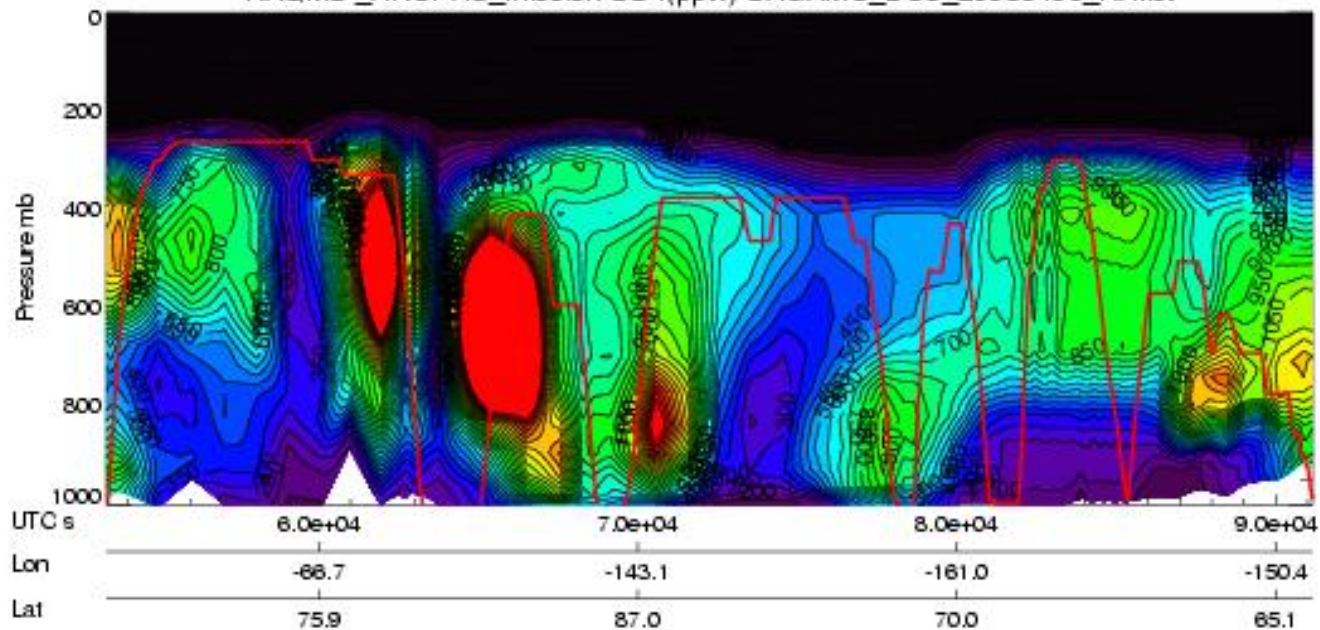
13:00 14:00 16:00 17:00 18:00 UT



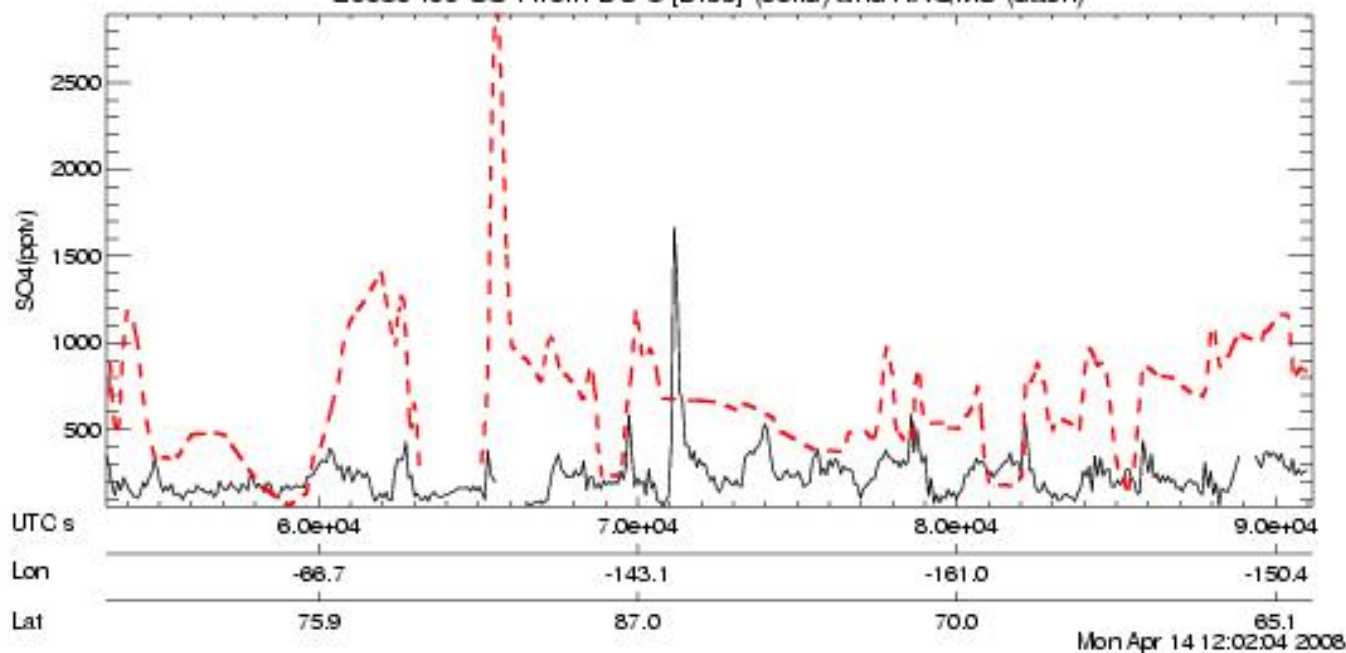


Aerosol Scattering Ratio (591 nm)



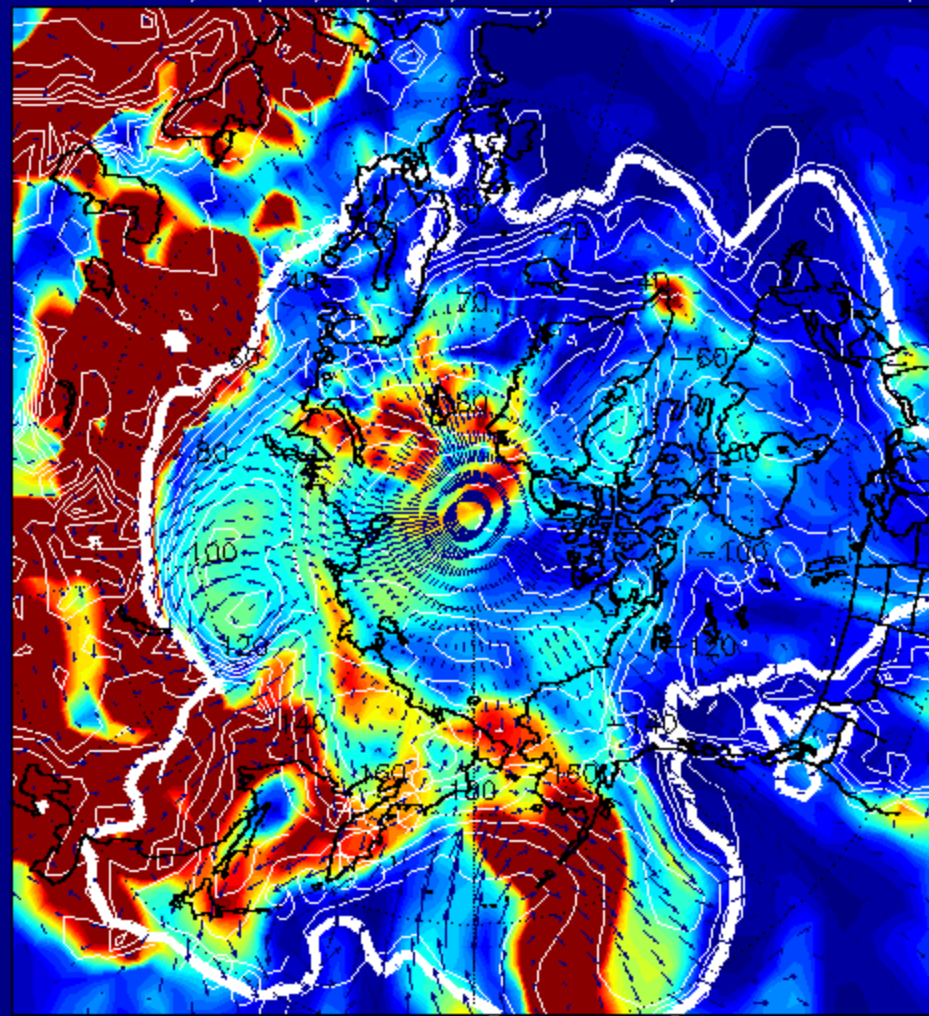


20080409 SO4 from DC-8 [Dibb] (solid) and RAQMS (dash)



280K BCOC 12Z 20080412

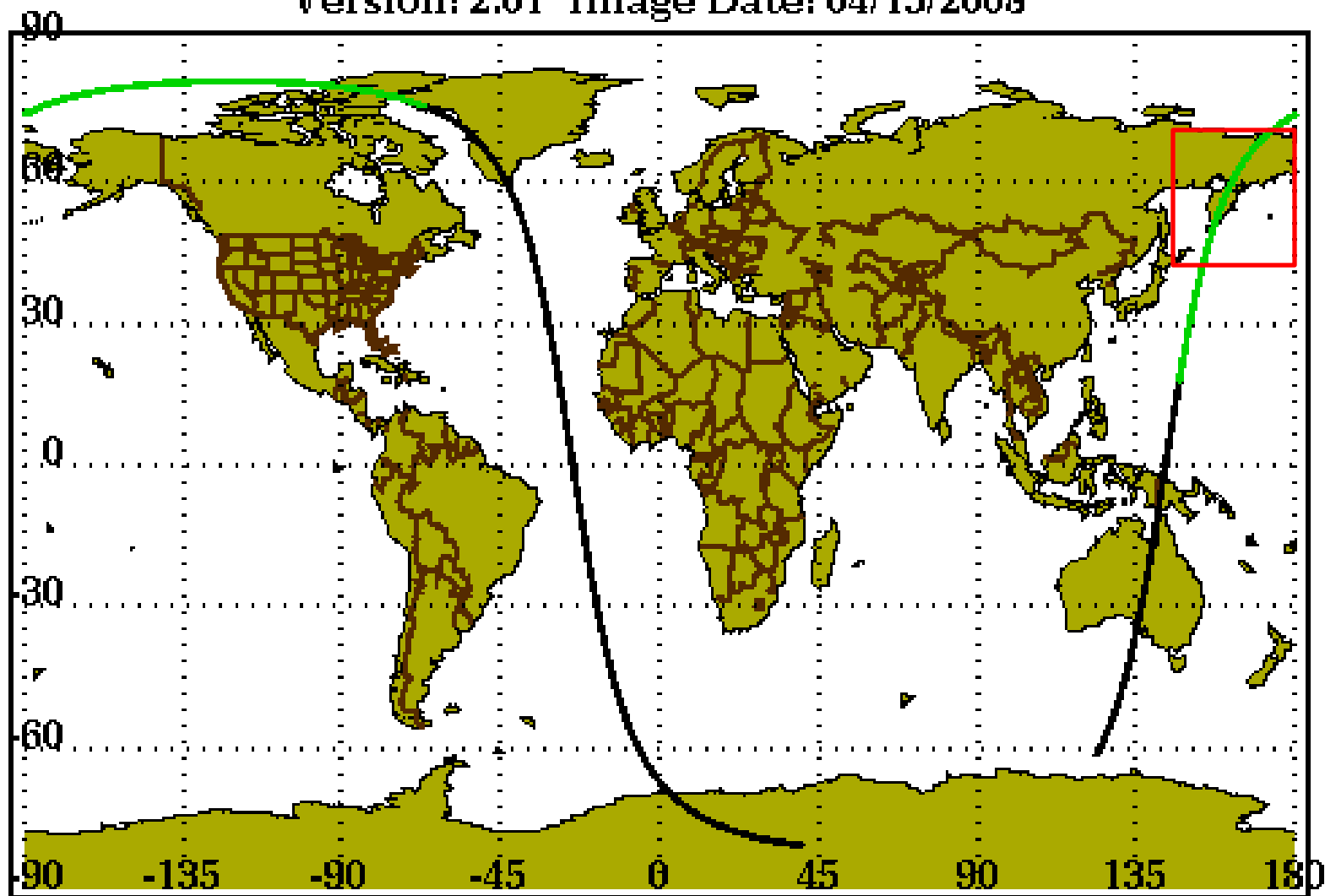
(Pressure Contoured/SFC (white) Trop (black) Intersection Dashed/95% Convective Precip=Red)



0 2 4 6 8 10
(ppbv)

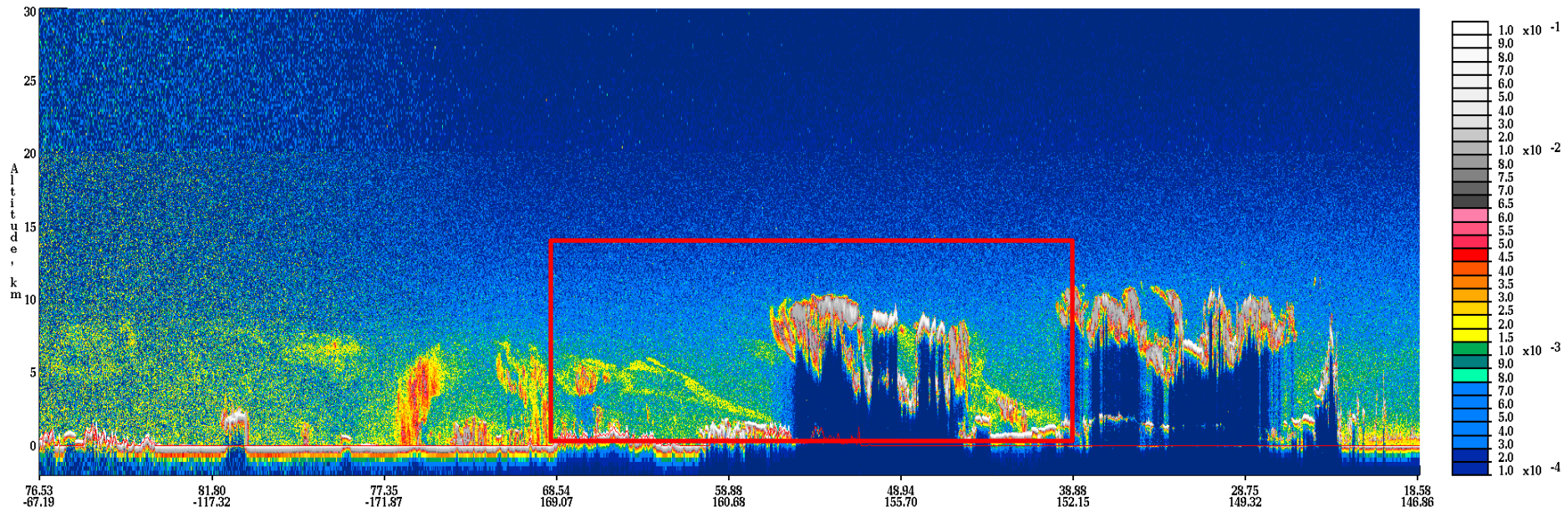
RAQMS_G -24hr OMI ASSIM Initialized 12Z 20080412

2008-04-12 15-00-00 UTC Start of Hour Conditions
Version: 2.01 Image Date: 04/13/2008



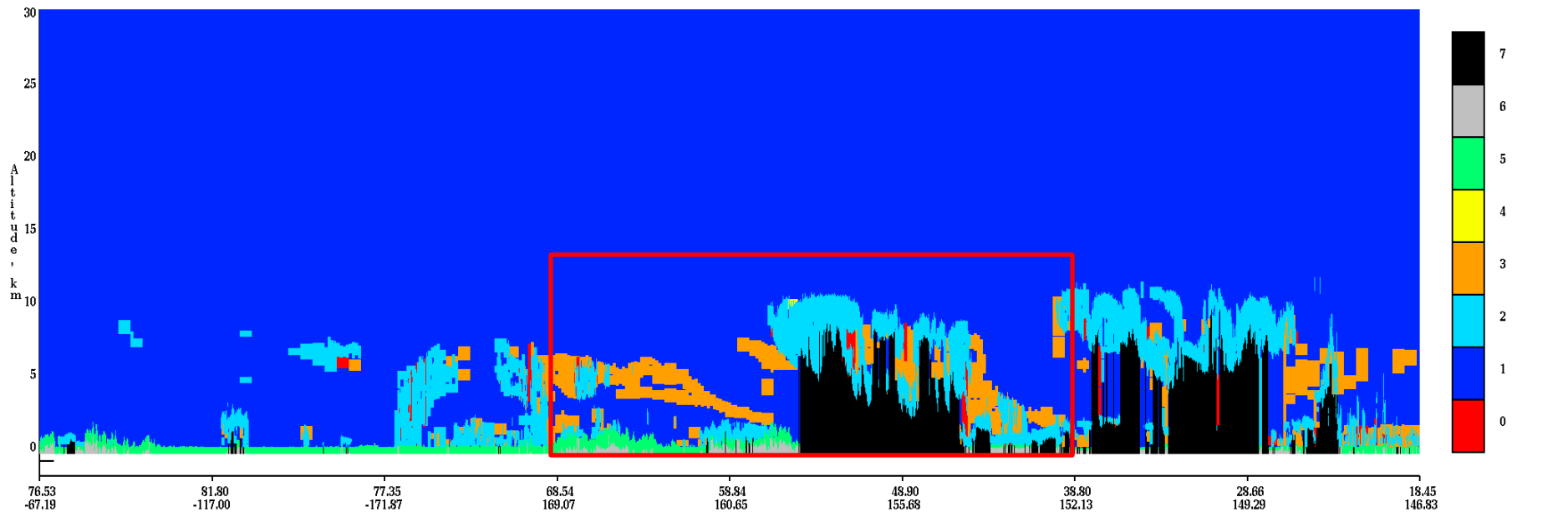
532 nm Total Attenuated Backscatter, /km /sr Begin UTC: 2008-04-12 15:45:15.4631 End UTC: 2008-04-12 16:07:48.7191

Version: 2.01 Image Date: 04/13/2008

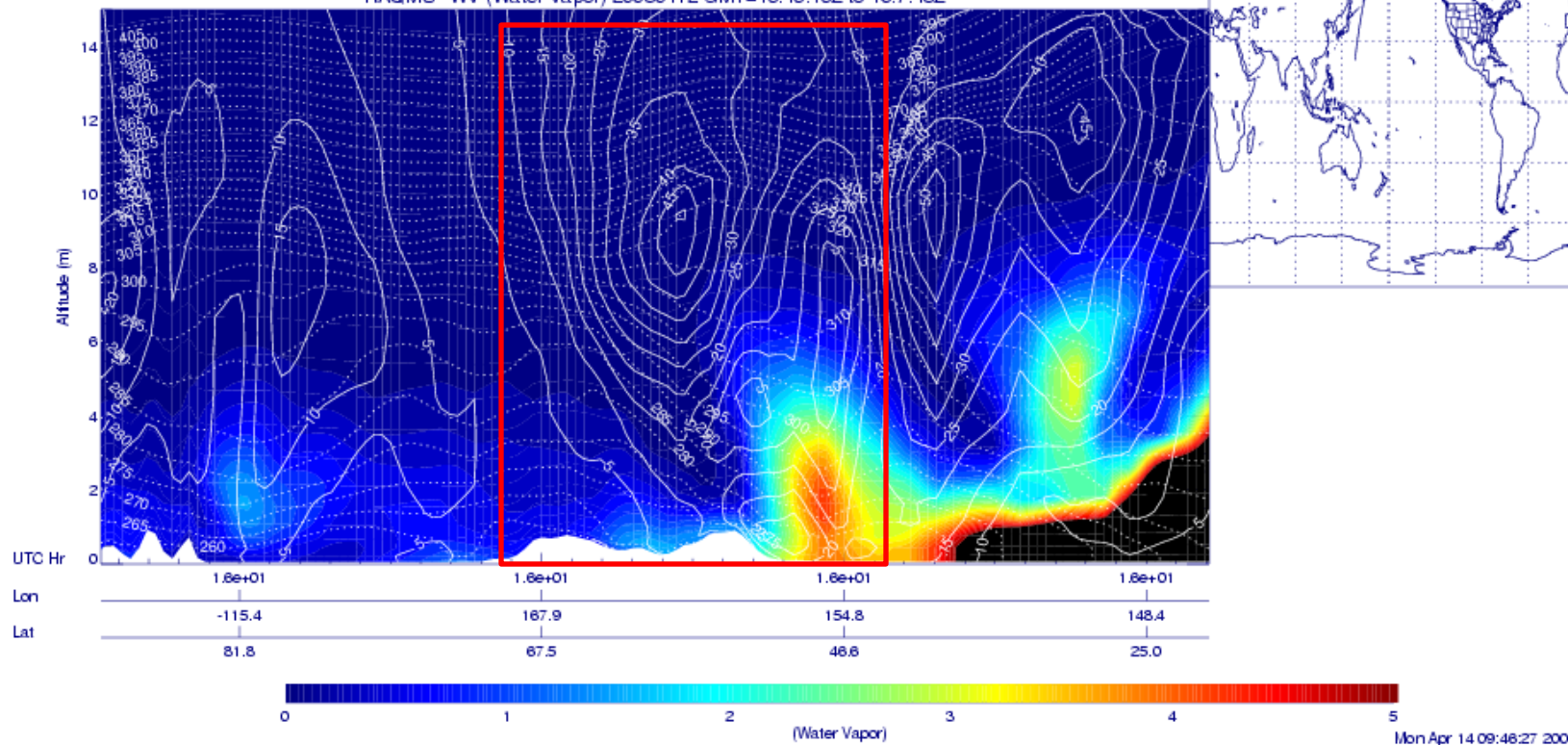


Vertical Feature Mask Begin UTC: 2008-04-12 15:45:15.4632 End UTC: 2008-04-12 16:07:48.7192

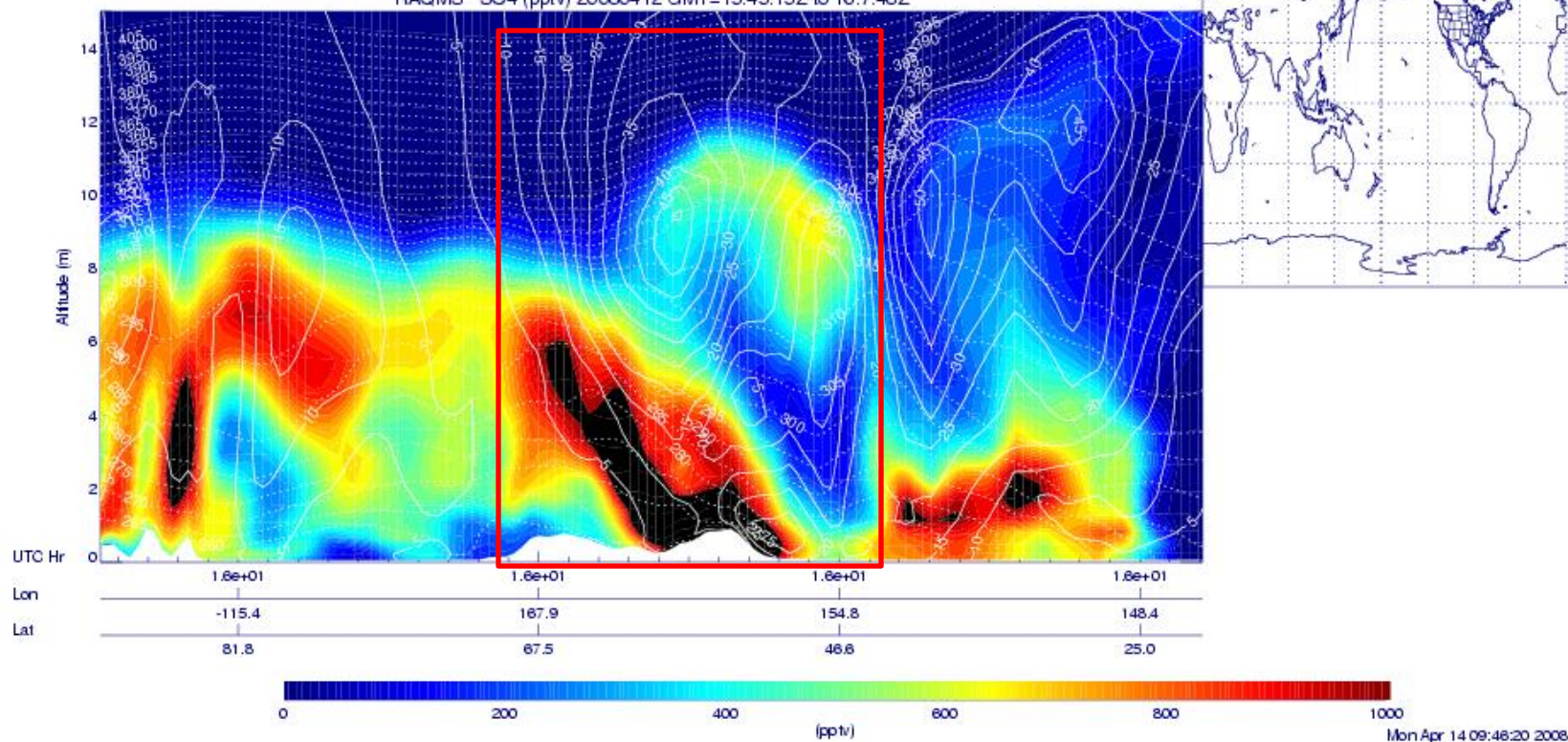
Version: 2.01 Image Date: 04/13/2008



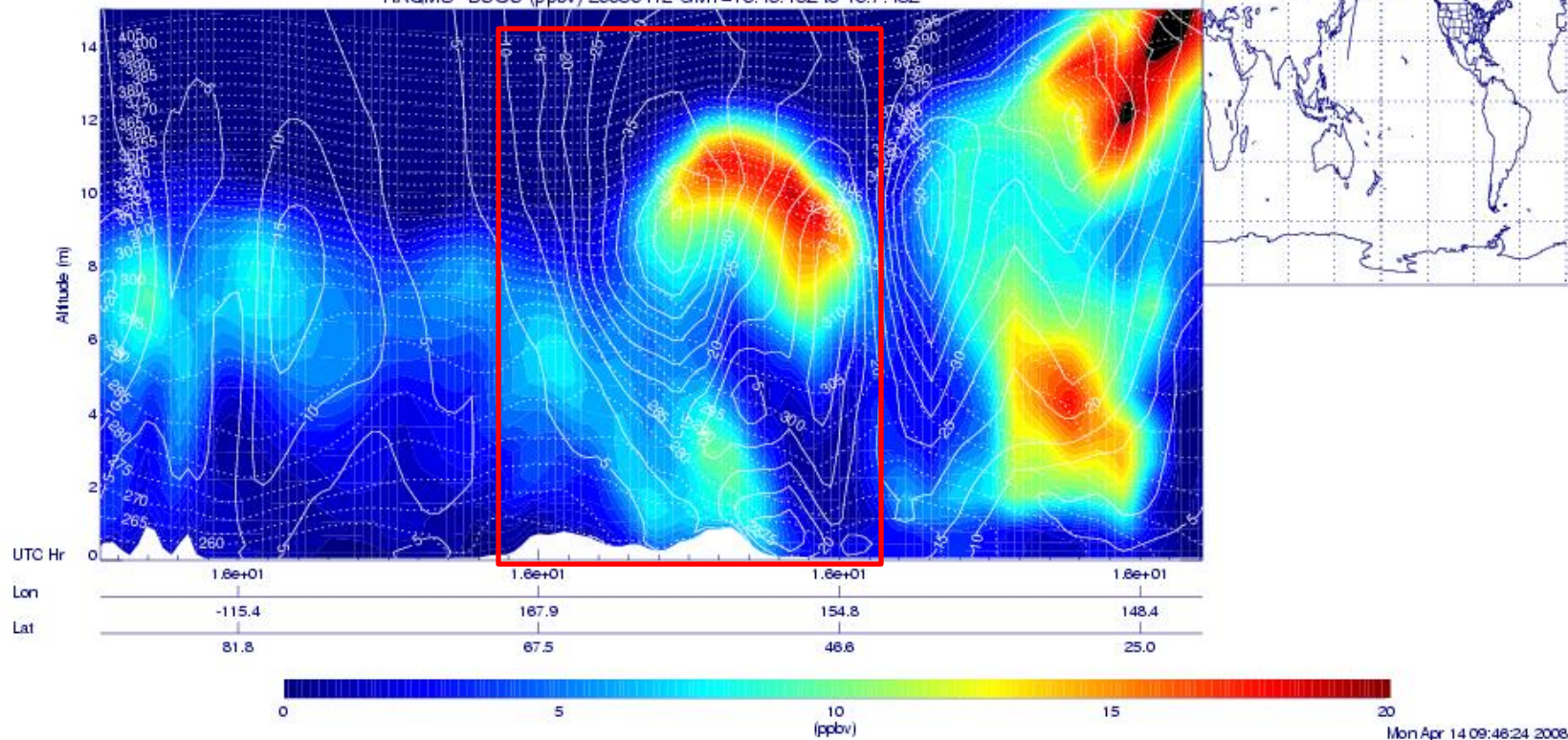
RAQMS ' WV (Water Vapor) 20080412 GMT=15:45:15Z to 16:7:48Z



RAQMS ' SO4 (pptv) 20080412 GMT=15:45:15Z to 16:7:48Z

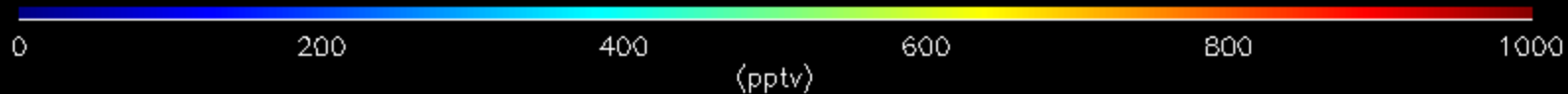
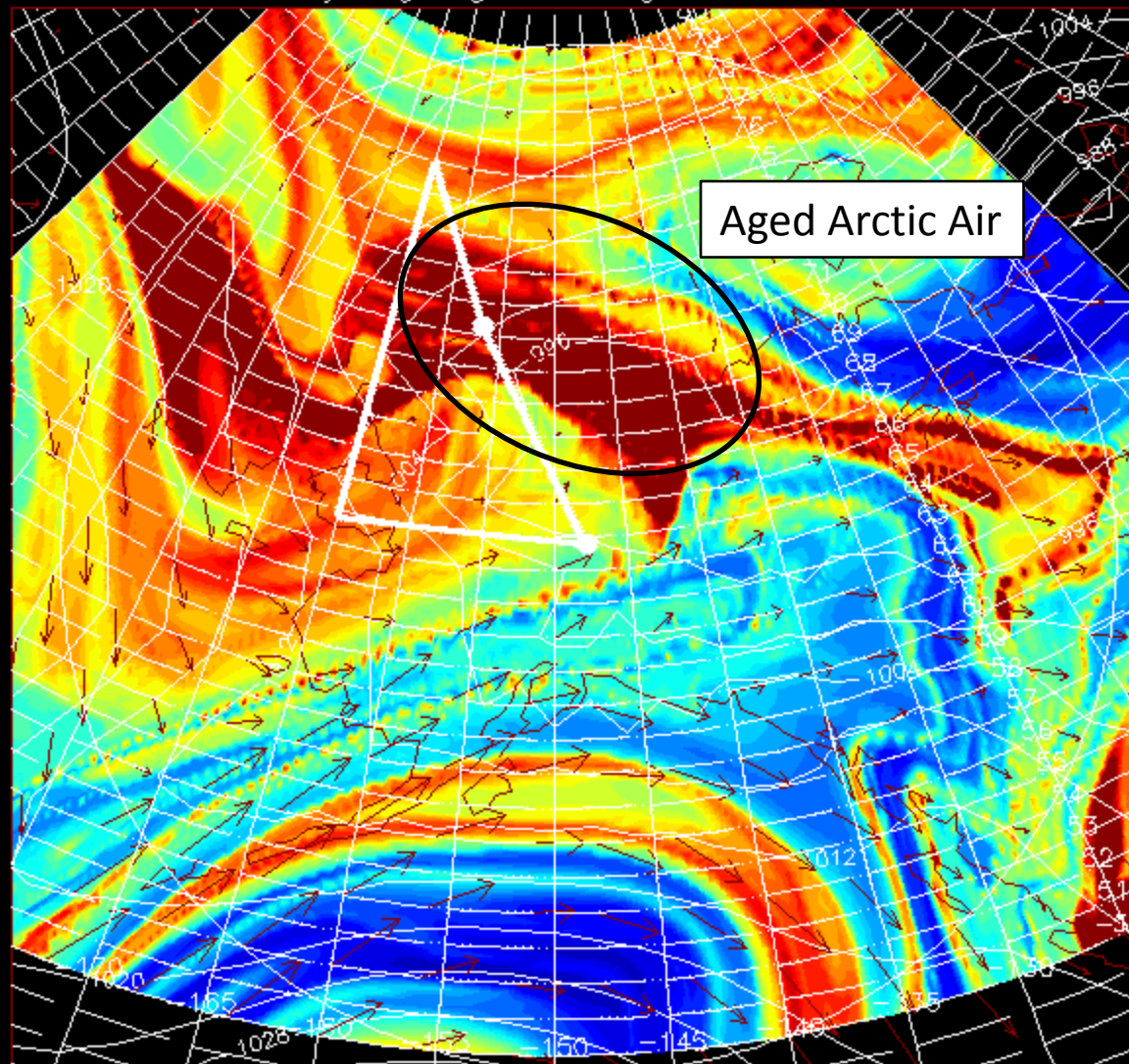


RAQMS' BCOC (ppbv) 20080412 GMT=15:45:15Z to 16:7:48Z



3km 36hr RDF SO4 (Mon Afternoon)

3km 5-day Lagrangian Averaged SO4 2008041500

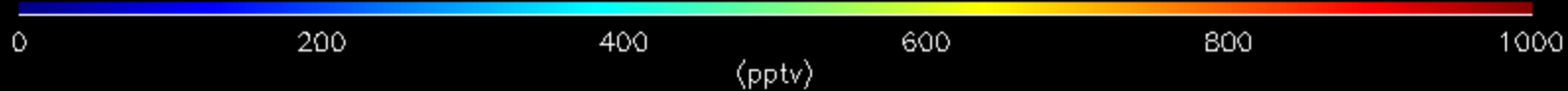


3km 60hr RDF SO4 (Tue Afternoon)

3km 5-day Lagrangian Averaged SO4 2008041600

Mid-lat polluted Air

Aged Arctic Air

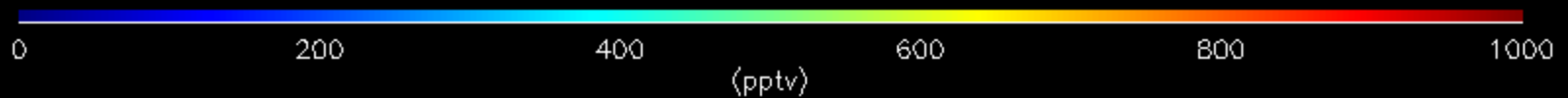


3km 84hr RDF SO4 (Wen Afternoon)

3km 5-day Lagrangian Averaged SO4 2008041700

Mid-lat polluted Air

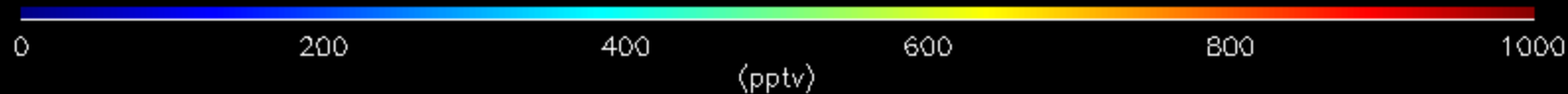
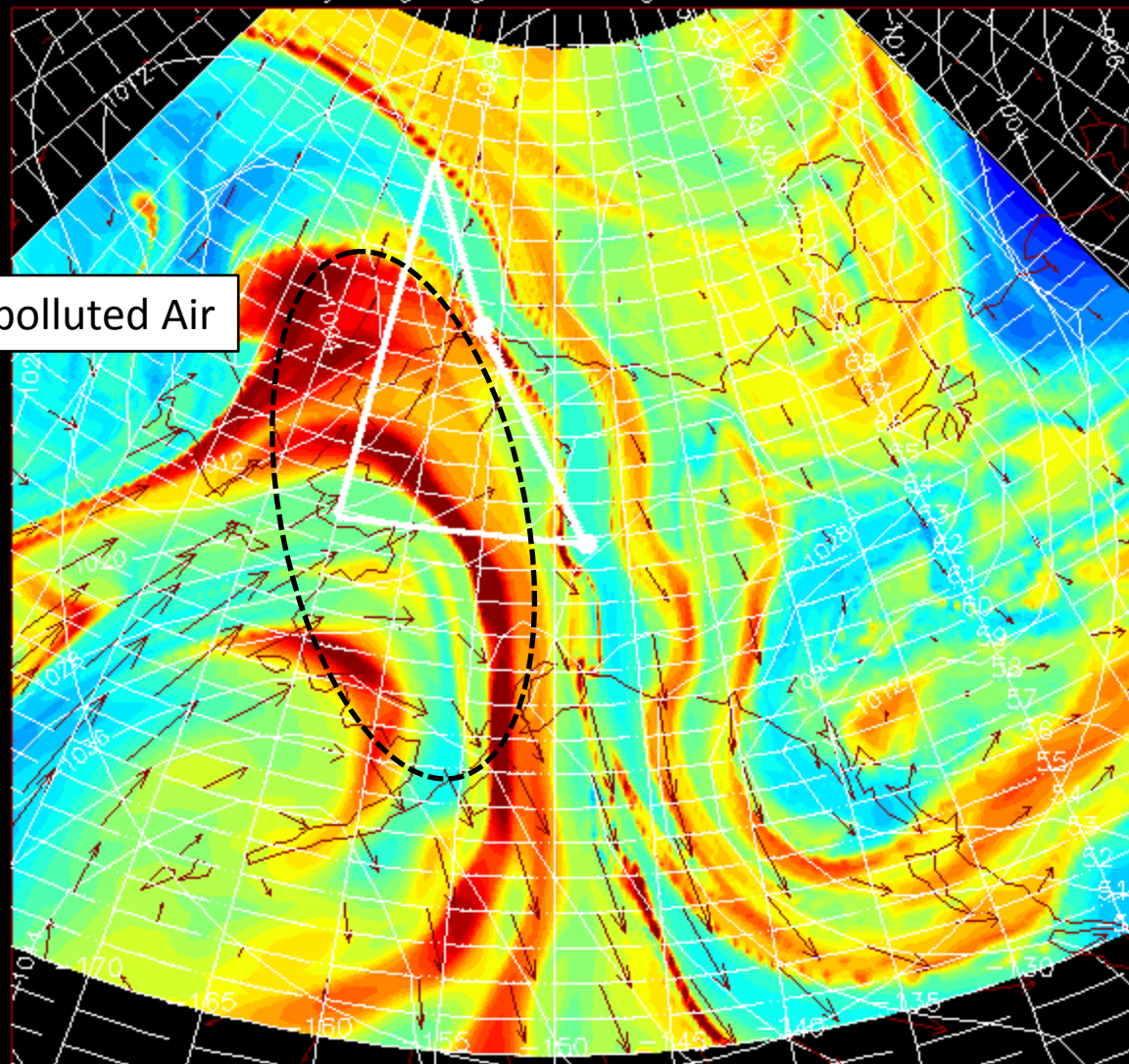
Aged Arctic Air



3km 108hr RDF SO4 (Thur Afternoon)

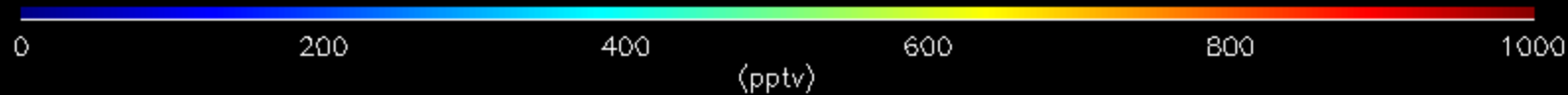
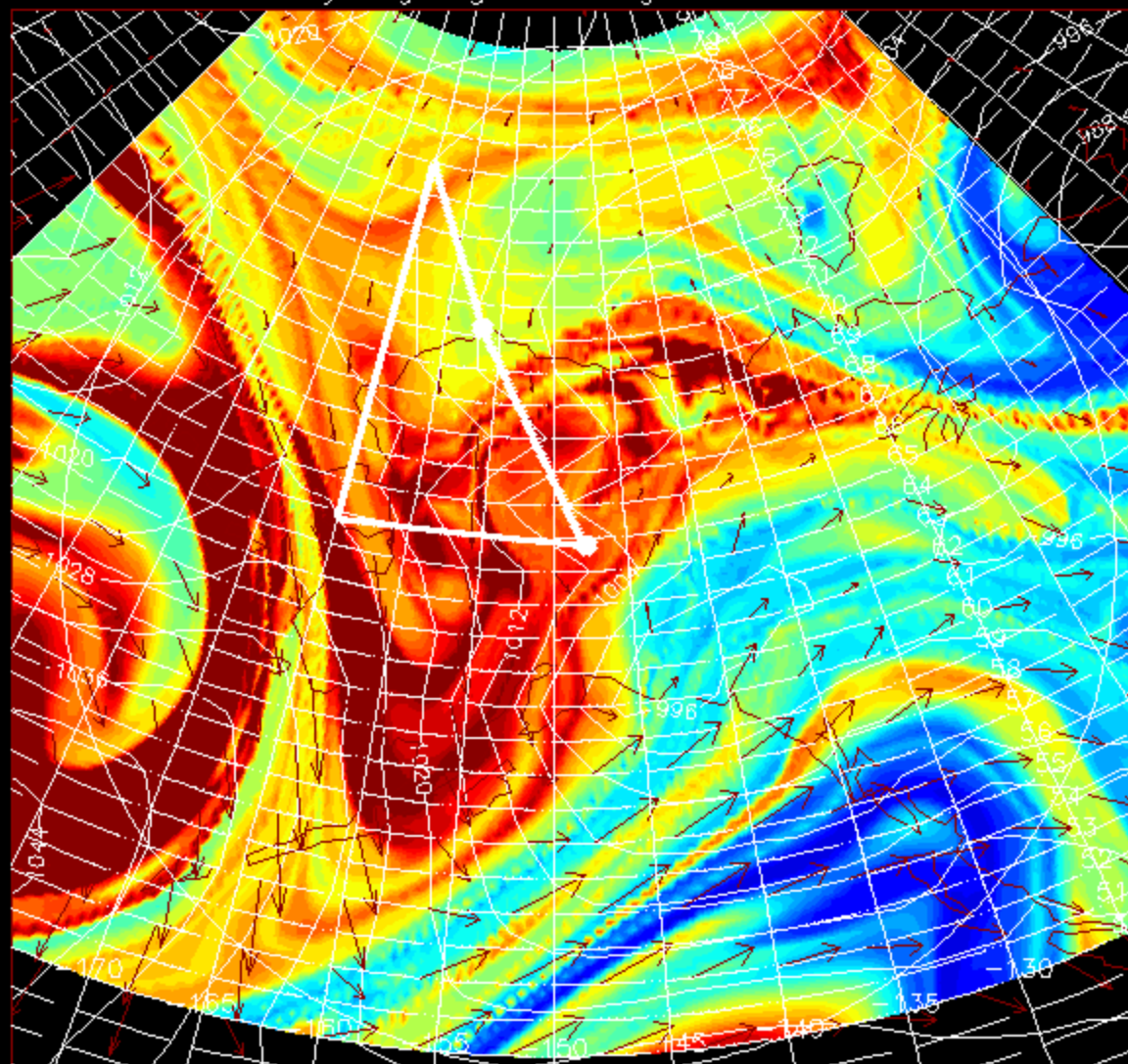
3km 5-day Lagrangian Averaged SO4 2008041800

Mid-lat polluted Air



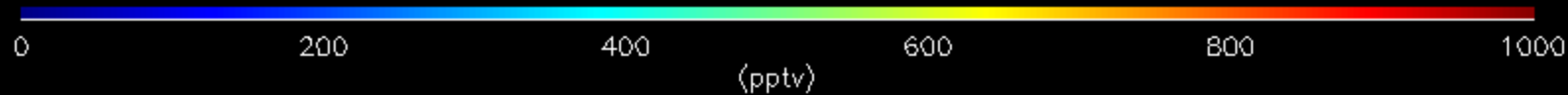
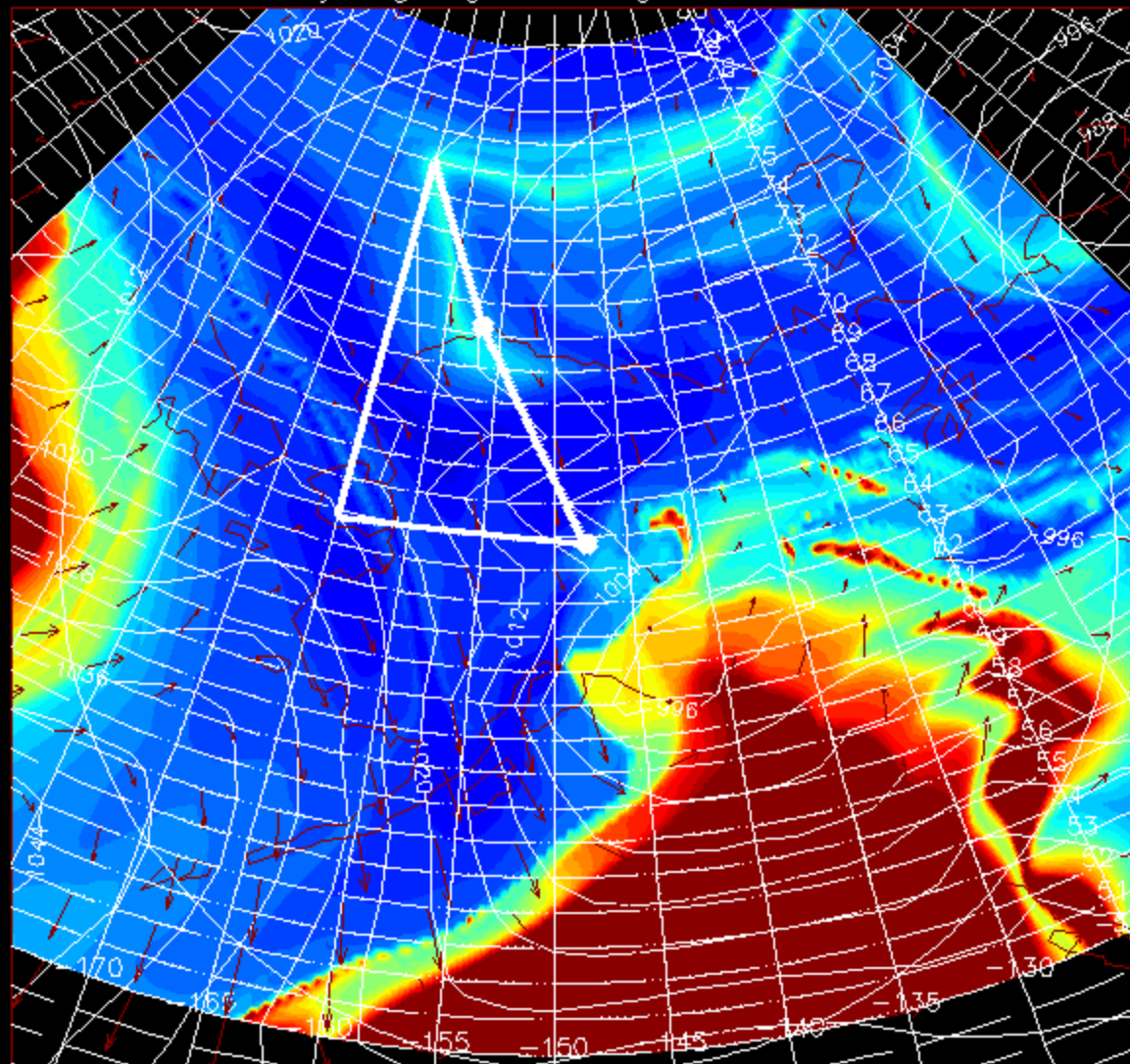
3km 60hr RDF SO4

3km 5-day Lagrangian Averaged SO4 2008041600



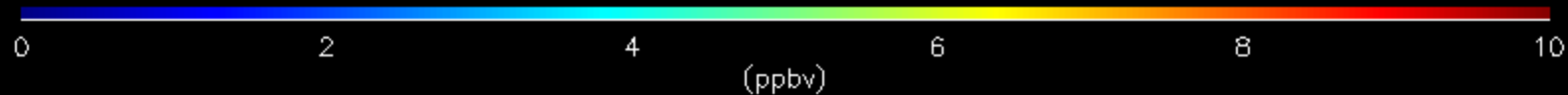
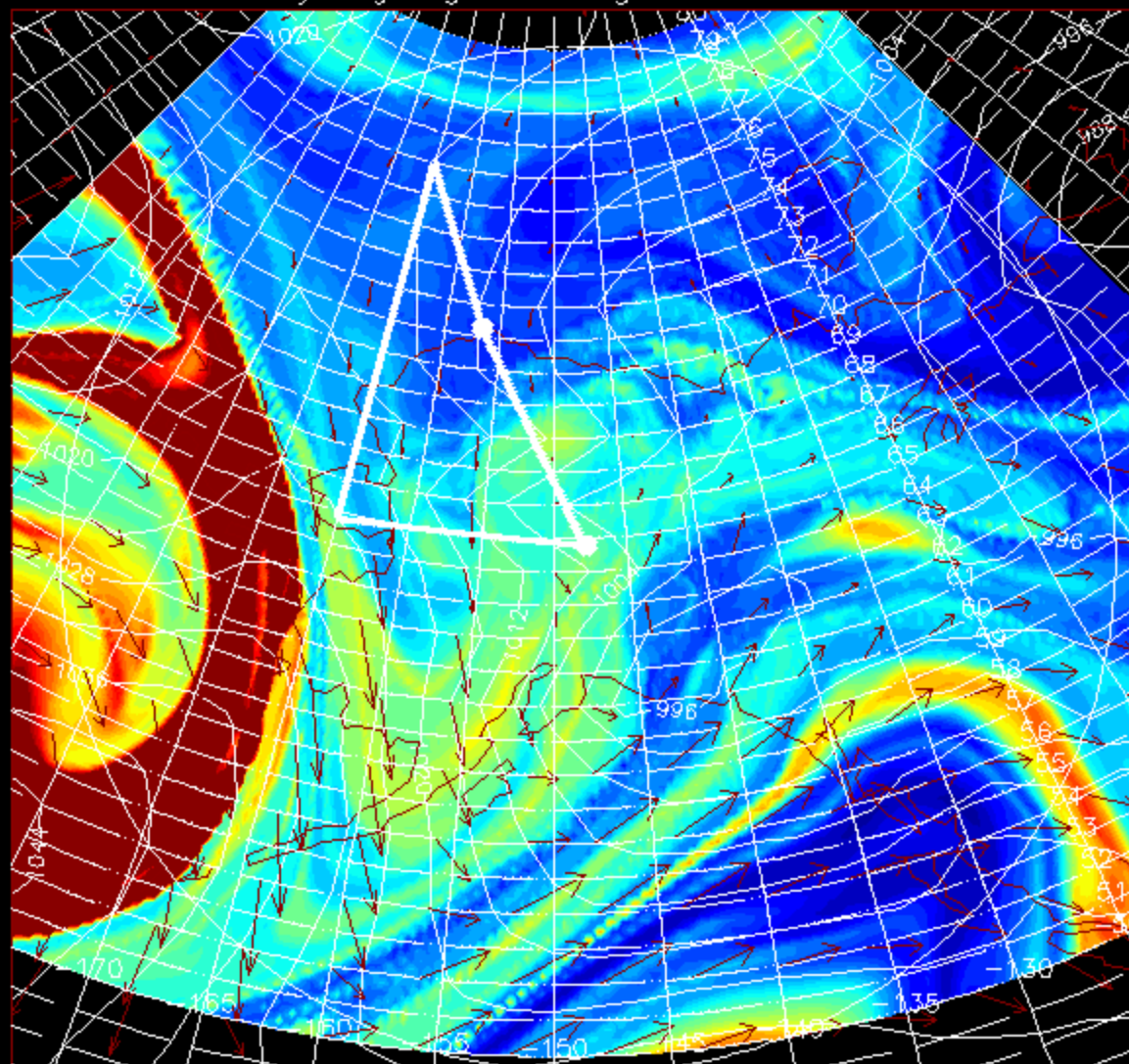
SFC 60hr RDF SO4

SFC 5-day Lagrangian Averaged SO4 2008041600



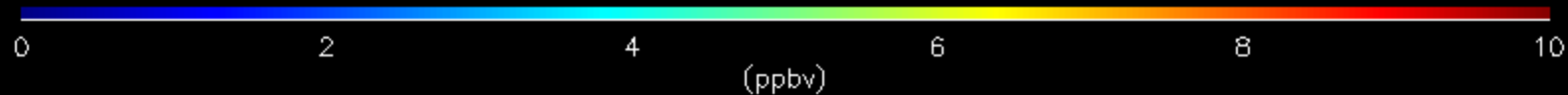
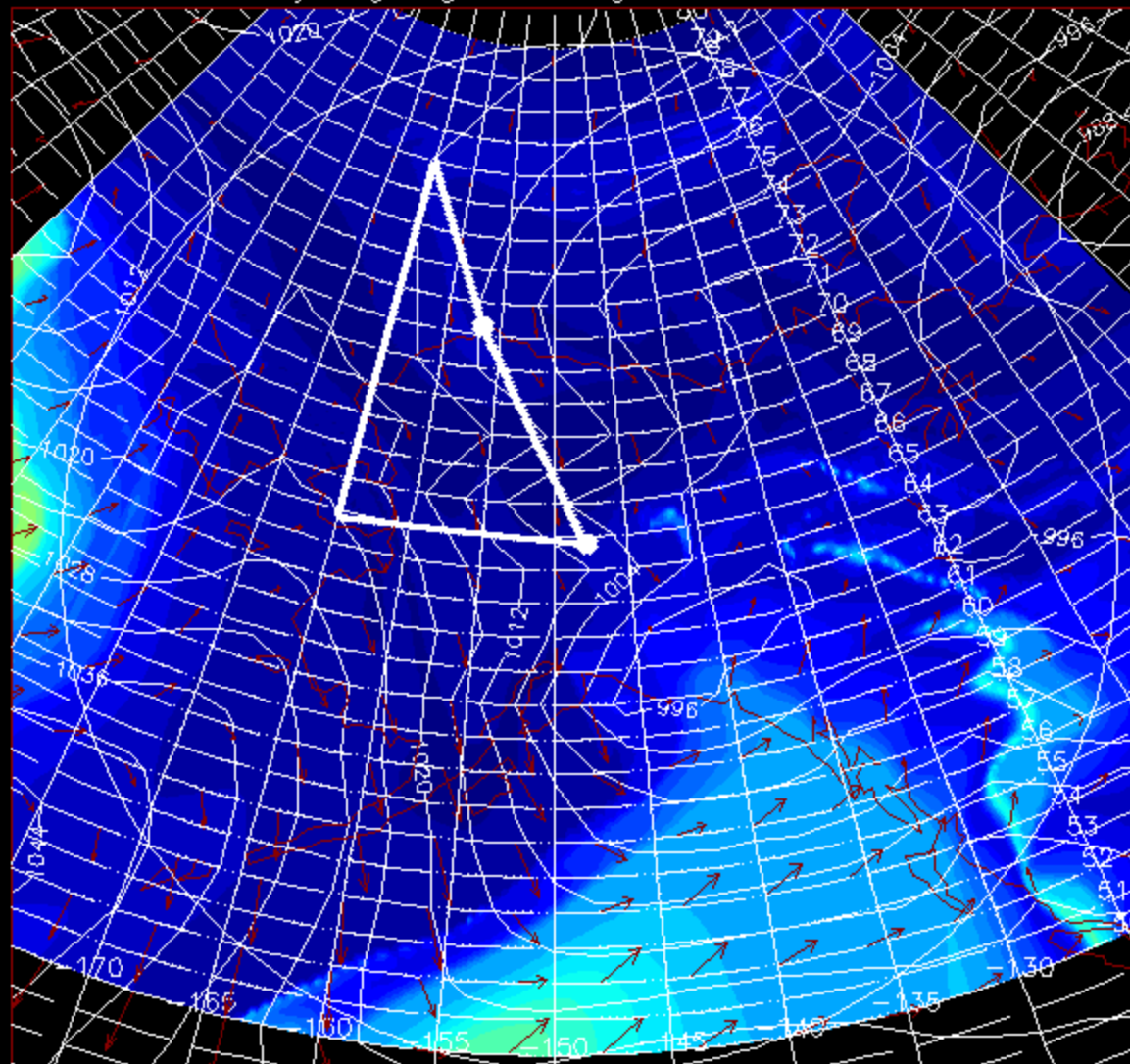
3km 60hr RDF BC+OC

3km 5-day Lagrangian Averaged BC+OC 2008041600



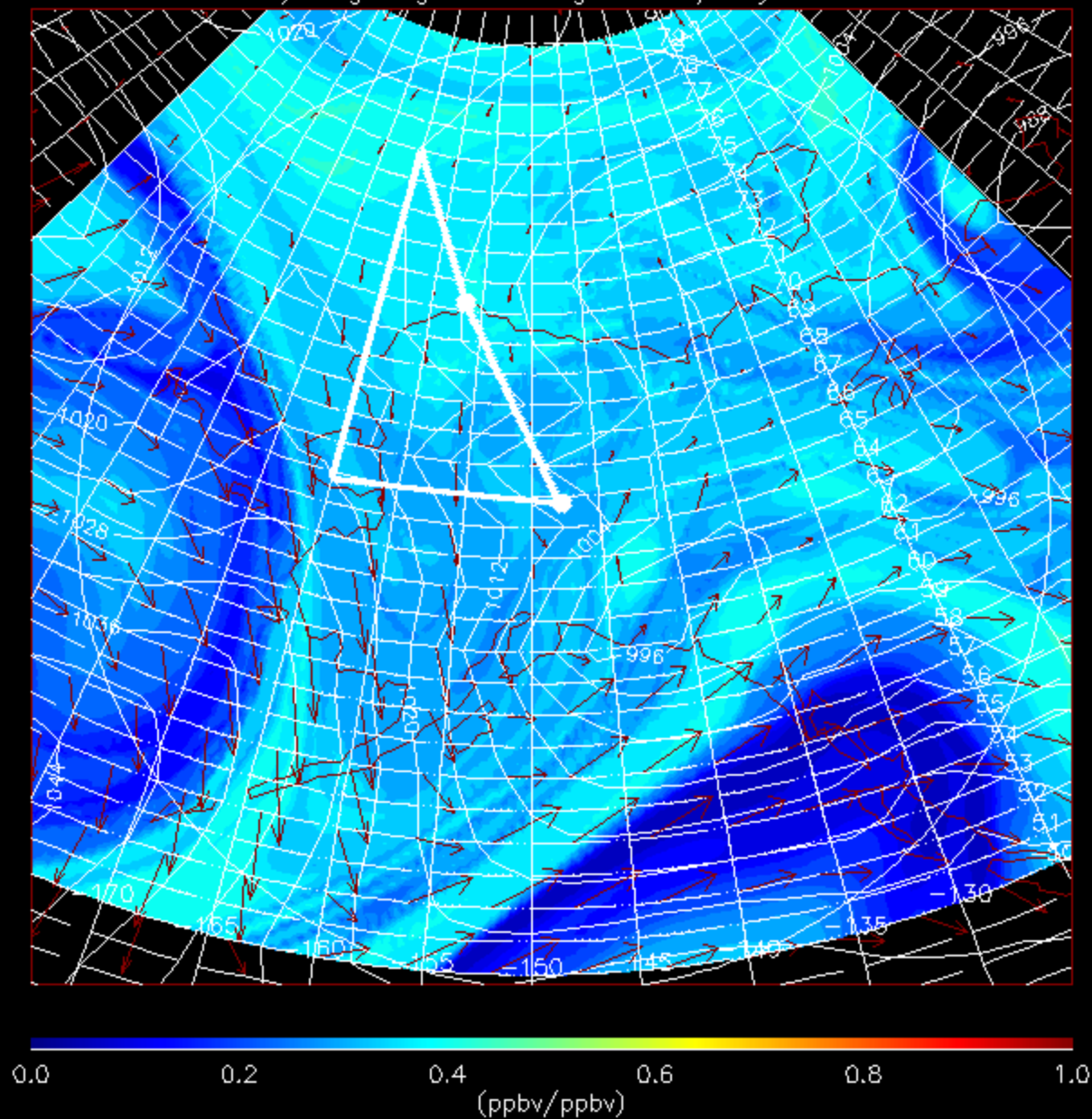
SFC 60hr RDF BC+OC

SFC 5-day Lagrangian Averaged BC+OC 2008041600



3km 60hr RDF PAN/NO_y

3km 5-day Lagrangian Averaged PAN/NO_y 2008041600



SFC 60hr RDF PAN/NO_y

SFC 5-day Lagrangian Averaged PAN/NO_y 2008041600

